LUND UNIVERSITY

School of Economics and Management
Department of Business Administration

FEKN90
Business Administration-
Degree Project Master of Science in Business and Economics

Spring term of 2013

How SRI Affect Valuation Multiples and Portfolio Management

Author:

Filip Andersson

Oskar Andersson

Supervisor:

Anders Vilhelmsson

Abstract

In this paper, we investigate conventional mutual funds' and socially responsible investment (SRI) funds' compositions of high and low valuation multiple stocks as well as potential differences in portfolio management between the two types of funds. Previous research has to a large extent focused on risk-adjusted stock returns and has not been able to be conclusive on whether SRI funds under- or outperform conventional mutual funds. We believe that our research can help to understand why previous research not have been conclusive and show that it is important to analyse investment styles when analysing funds' performance. We analyse the Swedish asset management market during 2008 to 2012 and our dataset consists of 15 conventional mutual funds and 13 SRI funds. We find significant differences where SRI funds invest in stocks with higher valuation multiples, i.e. less risky stocks, than conventional mutual funds. However, this difference is not explained by differences in valuation of socially responsible stocks but by that the portfolio managers of SRI funds invest differently in comparison to portfolio managers of conventional mutual funds.

Key words

Socially Responsible Investment (SRI), Valuation Multiples, Portfolio Management, Screening, Ethical Investment

Acknowledgements

We would like to thank our tutor Anders Vilhelmsson, Assistant Professor at the Department of Business Administration and Corporate Finance at Lund University, for valuable inputs and comments during the course of this paper. Further, we would like to thank all friends that have read our paper and helped us.

Lund, May 2013

Filip Andersson Oskar Andersson

List of tables

List of appendices

1 Introduction

Socially responsible investment (SRI) has gained an increased interest from companies and investors the last two decades, which is showed by the growing assets under management in SRI funds. As SRI has become more popular by practitioners, the academic world has also caught an interest to analyse the performance of SRI funds and whether SRI investors have to give up financial performance to be able to invest responsibly. The existing research on this area has to a large extent focused on risk-adjusted stock returns (see table 4.1) and the research has not come to a definite conclusion as research show under-, neutral and outperformance of SRI funds in comparison to conventional mutual funds.

This paper aims to analyse whether being socially responsible is valuable to companies and to their investors. To do so, we analyse if there are any differences in valuation multiples, such as price to book (P/B), price to earnings (P/E) and enterprise value to EBITDA (EV/EBITDA), between SRI funds and conventional mutual funds. We believe this is an interesting approach, which we have not seen be used before, since the theoretical framework of valuation suggests that all future value of being socially responsible should be discounted into today´s stock price. In addition, we aim to analyse portfolio management and investment styles, which is interesting to analyse since it is an important variable to be able to explain performance of SRI funds and conventional mutual funds. In previous studies on SRI funds, the portfolio management variable has been neglected and by comparing the composition of funds we can analyse differences in portfolio managers' investment styles and their incentives between SRI funds and conventional mutual funds. Further, we focus on the Swedish market which is not as thoroughly analysed the UK and the U.S. markets. This paper's sample consists of 13 SRI funds and 15 conventional mutual funds and all funds are established and marketed in Sweden.

We construct three hypotheses to be able to analyse potential differences in valuation multiples between SRI funds and conventional mutual funds and at the same time controlling for the portfolio management variable. The method which is used in this paper is inspired by Stenström and Thorell (2007), whom analyse the risk-adjusted performance and the portfolio management performance of SRI funds in the Swedish market while we analyse SRI funds' compositions of valuation multiples and portfolio management. The interesting feature of Stenström and Thorell (2007)'s method is that new SRI funds, i.e. replicating portfolios, are

created from conventional mutual funds to be able to test the portfolio management variable. The method will be explained in greater detail in chapter 5.

The first hypothesis tests the differences in multiples between the SRI funds and the conventional mutual funds, i.e. square 1 and 4 shown in table 1.1, and where the portfolio management variable is not controlled. The second hypothesis tests the pure differences in valuation multiples between socially responsible and socially irresponsible stocks by controlling for the portfolio management variable. This is done by analysing potential differences in multiples between the conventional mutual funds, square 1, and the new SRI funds, square 2, i.e. the replicating portfolios, which are constructed by screening the selected conventional mutual funds from stocks that are deemed to be socially irresponsible investments. This test enables us to test differences in multiples between the SRI funds and the conventional mutual funds where the portfolio managers of conventional mutual funds manage both groups of funds. The third hypothesis tests portfolio management in SRI funds and conventional mutual funds by comparing the SRI funds, square 4, to the replicating funds, square 2. By doing so, we are able to analyse the differences in two types of SRI funds where SRI portfolio managers manage one of the two types of funds and conventional mutual portfolio managers manage the other type of funds.

Table 1.1 – Overview of fund types and portfolio managers (1)

		Fund type	
		Conventional	SRI
Portfolio manager type	Conventional	Conventional fund with conventional portfolio manager Square 1	SRI fund with conventional portfolio manager (i.e. the replicating portfolios) Square 2
	SRI	Conventional fund with SRI portfolio manager Square 3	SRI fund with SRI portfolio manager Square 4

The results from the study show that there exist differences between SRI funds and conventional mutual funds in their composition of stocks where SRI funds tend to invest in stocks with higher multiples than conventional mutual funds. However, these differences are not explained by differences in valuation between socially responsible and socially irresponsible companies. We show that these differences are explained by the portfolio

management variable and not that socially responsible companies are valued higher or lower than socially irresponsible companies. Portfolio managers of SRI funds tend to invest in stocks trading at higher valuation multiples than portfolio managers of conventional mutual funds. Possible explanations to this are that investors in SRI funds have other objectives than pure financials and consequently that portfolio manager of SRI funds do not have the same incentives as portfolio managers of conventional mutual funds to increase returns to attract new capital.

This paper is constructed as follow. Firstly, we discuss the definition of SRI and how the investment process within SRI funds differs from conventional mutual funds. Secondly, we put forth the theoretical framework of valuation and portfolio management, which we use to construct our hypotheses. Thirdly, we display previous empirical research and discuss how the research has developed. Fourthly, we discuss the method we use to test our hypotheses and the data we use. Lastly, we discuss and analyse the empirical findings after which the summary is presented.

2 Definition of Social Responsible Investing

This section gives a short introduction to the subject and describes how the SRI fund industry has evolved over the years. Further, brief information regarding how SRI funds screen their possible investments and how this process differs from how conventional mutual funds make their investment decisions are presented.

Corporate Social Responsibility

Corporate Social Responsibility (CSR) is a concept that put constraints on firms' business models, such as certain guidelines regarding environment, social and economical (ESG) responsibility (Morrison Paul & Siegel, 2006). By incorporating CSR, firms are minimizing the risk for irregularities and consequently taking more responsibility for their operations (European Commission, 2013). The motives for firms to incorporate CSR into their business models are to behave more ethically and hence create value to both their shareholders and other stakeholders (Hellsten & Mallin, 2006). If a firm is about to undertake a CSR program, the total benefits of the program must exceed the total costs of extra resources related to the program in order to create more value for the stakeholders (Morrison Paul & Siegel, 2006).

Socially Responsible Investment

SRI funds are a development of CSR, where SRI funds either exclude investments in firms that do not meet certain standards or invest in firms that are top of the class in their industry regarding ESG issues. SRI funds can with help of their screening processes sort out investments that do not meet the minimum standards and these standards can be related to sin, environmental, social or ethical objectives, which are explained in greater detail in Screening section (Renneboog, Horst and Zhang, 2010). SRI funds use various types of screening methods to decide which companies to invest in, such as positive and negative screening. Further, SRI funds are able to put pressure on firms in order to meet the funds' standards and/or use their voting rights to affect the firms' decisions (Starr, 2007). UNPRI[1] is an international network for investors that work towards sustainability and to become better owners in order to incorporate social responsibility in the firm. The investors that voluntary subscribe to UNPRI are bound to follow six principles that will increase the awareness of ethical issues in their investment decision process. The six principles are to incorporate ESG

[1] UNPRI is the United Nation Principals for Responsible Investment

issues into investment analysis, be active owners and incorporate ESG into policies, demand appropriate ESG disclosure from investees, promote the Principles, work to enhance the effectiveness of the Principles and lastly report own activities and progress. (UNPRI, 2013).

Industry Background

SRI origins from religious organisations in the U.S. and the first SRI fund was the U.S. Pioneer Fund, launched in 1928, which excluded investment in firms that operated within the tobacco and/or the alcohol industries (Eurosif, 2012). The SRI industry has been growing fast during the last decade and it is currently outgrowing the overall investment market in Europe (Eurosif, 2012). In Sweden the assets under management by SRI funds grew by 16 % from 2009 to 2011 and according to Eurosif the growth rate has not shown any signs of slowing down. The Swedish SRI market is considered to be mature and some assets managers believe that SRI will become more and more mainstream and firms will consider it as a natural part of their investment decision processes (Eurosif, 2012).

The demand for SRI has been driven by transparency and the power of peer pressure. As the information available to the stakeholders increases, the stakeholders' demands on the firms increase. If a firm behaves unethically, their stakeholders can use their combined power to mitigate this behaviour. (Eurosif, 2012)

SRI Screening

SRI funds use screening in order to get information about potential investments and to reduce the information asymmetry. SRI funds can find research information by either using internal SRI research or by acquiring external SRI research from firms that rate potential targets' ESG performance, such as Ethcix SRI Advisor and Ethisphere. The screening can be carried out in at least two different ways; SRI funds can either use positive screening or negative screening. It is this screening process that differentiate SRI funds from conventional mutual funds where SRI funds might be restricted from owning assets in particular industries and/or companies.

One of the biggest issues raised regarding SRI is the asymmetrical information problem, where the SRI funds have a large information disadvantage compared to their potential investment targets. The companies know much more about their own ESG performance than outsiders and it is therefore important for SRI funds to closely follow and analyse the targets'

performance. Further, the concept of SRI is vague since there is no global metric system to use when assessing ESG performance and hence it is hard to compare funds with each other (Starr, 2007; Rhodes, 2009). Since there are no global standard for being socially responsible, the level of ESG performance or restriction of industries demanded by investors in SRI funds differ. Further, due to the asymmetrical information problem, the criteria for being socially responsible can be very generalized and sometimes weak. The most commonly used screening processes are:

Positive: SRI funds choose to invest in those firms that meet the funds' superior standards, i.e. "best-in class" firms. Generally, these firms can show superior results in social practice as well as governance.

Negative: Negative screening is the most common screening and it sorts out investments that do not meet the standards of the fund (Starr, 2007; Eurosif, 2012). Most commonly, negative screening excludes firms that are involved in production of tobacco, gambling, alcohol and weapons.

Positive and negative screening can be applied to some specific areas or industries in order to find or exclude investments that meet the standards of the fund. Depending on the fund, it can decide weather to exclude only the unethical industries and/or invest into social responsible firms, which can be screened by using positive and/or negative screening. The most popular types of orientations are:

Environmental: The choice of investing in firms that meet superior environmental standards or neglect investments that do not meet the standard criteria regarding environmental issues. When using a positive screen, firms that use renewable energy typically meet the standards to be included. Further, when using a negative screen firms that invest in e.g. nuclear plants are neglected in the investment decision process. For example, Barrick Gold Corporation has been neglected since it is accused of causing toxic spill in Tanzania (see appendix 1).

Social: Positive screening in the social context usually means that SRI funds invest in firms that work towards a better society by committing to social activities such as local organisations, good workplaces, human rights and employing minorities. Negative screening can be used by neglecting investments in firms that work against e.g. diversity and human

rights among others. For example, Wal-Mart and Freeport-McMoRan Copper and Gold Inc. are two of the firms that have been excluded since they are working against labour relations (see appendix 1).

Ethical: An ethical screen neglects investments in firms that use unethical methods such as animal testing, abortion, conventions or violating religions. Positive screening can be used and can include firms that develop products for human health care.

Sin: Sin is a pure negative screen that neglects investments in companies that are involved in the production of tobacco, weapons, alcohol and gambling. Firms are usually excluded if their production of any of these products exceeds a certain percentage of the firms' total revenue. For example, Japan Tobacco Inc. and Phillip Morris have been excluded for being engaged in such activities (see appendix 1).

Governance: Governance addresses the conflicts of interests between managers and investors (Renneboog et al., 2008). Funds can engage in exercising their voting rights and hence affect the decisions made in firms (Eurosif, 2012). (Renneboog et al., 2010)

3 Theoretical framework and hypotheses

This chapter discusses the theoretical framework that is used to construct our hypotheses. Firstly, we discuss whether it is valuable for a firm to act responsibly. Secondly, we introduce theory on valuation multiples and why firms can be traded at different valuation multiples. Thirdly, portfolio management theory and how investment styles can differ are discussed. In the last section of this chapter, we develop our three hypotheses.

Value of being socially responsible

This section discusses the theoretical framework of CSR and SRI and whether it is valuable to a firm and its investors if the firm takes other stakeholders than just the shareholders into consideration when making its strategic decisions. Firstly, we present the cost-based view of being socially responsible. Secondly, we present the value-adding view of being socially responsible.

Costly to be socially responsible

There are many theories that suggest it is costly to be socially responsible (Friedman, 1970; Jensen, 2002). Friedman (1970) discusses the purpose of companies and concludes that companies shall focus on maximizing shareholders' wealth and not care about philanthropy. Friedman (1970) establishes his theories on the basis of the principal-agent theory where the management (agents) serves the owners (principals) of the company and shall therefore act to maximize their wealth. When the agent acts in self-interest and try to create value for others than the principal, there is a principal-agent problem. If a manager of a company uses the company's money in other ways than increasing shareholders' wealth, the manager would be spending the shareholders' money (Friedman, 1970).

Jensen (2002) criticizes the stakeholder theory put forth by Freeman (1984), which says that the management of a firm shall consider and try to please all stakeholders of the firm. It is impossible to satisfy all wishes since they might be too costly but also contradictive to each other, for example customers wish lower prices while shareholders wish higher prices to maximize profits (Jensen, 2002). According to Smith (1776), there are no conflicts between working towards both financial and social objectives, since when everyone maximizes their own value the allocation is Pareto optimal. However, this does not hold when e.g. it is

possible for firms to maximize their profits while polluting and thereby destroying value for other companies (Jensen, 2002). Further, there are empirical findings that display a negative relationship between increasing profits and being socially responsible (Aupperle, Carroll and Hatfield, 1985). Aupperle et al. (1985) sent out questioners to CEOs and found that the more focused the CEOs are on performing financially good results; the less they focus on ethical, legal and discretionary issues.

The view of that being socially responsible is costly to a company argues that socially responsible stocks should not be as demanded by investors as conventional stocks and therefore be traded at lower multiples than conventional stocks.

Value-adding view on being socially responsible

During the last centuries, contradictive theories to the cost-based view have been developed where the focus is on how companies can profit by increasing the total value for all stakeholders of a firm (Porter & Kramer, 2006; Porter & Kramer, 2009; Jones, 1995; Hellsten & Mallin, 2006). According to Porter and Kramer (2006), most companies establish their CSR-departments, which create firms' corporate responsibility strategies, independently and with no alignment to the firms' core strategies. By integrating firms' CSR-strategies into their core strategies, CSR would not be seen only as a cost anymore but as something value creating (Porter & Kramer, 2006). Porter and Kramer (2006) develops the theory of shared value where the authors recognize a positive interdependence between companies and society. Porter and Kramer (2009) claims that the focus on only maximizing the shareholders' value, which is the case for the last two decades, has worsen the ability for true competition and innovation since companies instead have focused on laying off employees and on price competition. Companies' focus should be to enhance the combined value, instead of transferring value from society to companies, which is possible when economic value is created from creating societal value (Porter & Kramer, 2009).

Hellsten and Mallin (2006) discusses CSR in the same manner as Porter and Kramer (2006), where CSR is not a soft approach but rather a tool to help society, which is fundamental to create value for the firm long-termly. In addition, Jones (1995) says that a firm that acts responsibly can achieve a competitive advantage by not being opportunistic but creating long-term stakeholder relationships. Hellsten and Mallin (2006) also claims that a firm has an

obligation to all stakeholders to be able to make profit. This is in line with Freeman (1984)'s stakeholder theory.

This value-creating view on socially responsible stocks therefore suggests that socially responsible stocks should be more demanded by investors due to their better positions to create value than conventional stocks and consequently traded at higher multiples.

Valuation multiples

In this section, we firstly discuss the theoretical foundation of valuation and valuation multiples. Secondly, we present a discussion on how valuation multiples can be affected by market demands. Thirdly, we discuss cash in- and outflows of funds and how it can affect valuation multiples. Lastly, we discuss the potential problems of framing a company to be (not to be) socially responsible to obtain a higher valuation of the company.

Theoretical foundation of valuation

Two methods that are often used to value a company are the Discounted Cash Flow Analysis model, DCF, and valuation multiple analysis. The DCF-model, formula presented below (1), is used to discount all future expected free cash flows at the weighted average cost of capital (WACC) and thereby finding the value of a company. The formula for WACC is shown below (2) and the cost of equity (R_e) is derived from the SML-formula (3) where the covariance of a stock relatively to an index is priced. The more correlated a stock is to an index, the higher the beta is and consequently the higher the WACC is. Given our previous discussion on whether being socially responsible is valuable to a company, the value-adding view believes that the discounted value of a company will increase when it becomes socially responsible since the free cash flow increases as well as the risk decreases. Consequently, the cost-based view believes the discounted value will decrease since the firm's free cash flow is believed to decrease.

$$DCF = \sum_{t=0}^{N} \frac{Free\ Cash\ Flow_{\mathrm{t}}}{WACC} \tag{1}$$

Where free cash flow can be defined as NOPLAT + non-cash operating expenses - investments in Invested capital (Koller at el., 2010)

$$WACC = R_e \, x \, \frac{E}{D+E} + R_d \, x \, \frac{D}{D+e} \quad (2)$$

Where R_e is return on equity, E is equity, D is debt and R_d is return on debt

$$SML = R_f + \beta \, (R_m - R_f) \quad (3)$$

Where R_f is the risk-free return, β is the systematic risk and R_m is the return of the market portfolio

Valuation multiple analysis is a way to value companies where peer companies' multiples are used to find a valuation span for the company you are valuing. When using multiples for valuing a company, it is important to find a good peer group and to use the right multiples to be able to find the best valuation. This paper analyses three types of valuation multiples, which are described in greater detail in chapter 5. In this section, the theoretical logic of valuation multiples are discussed and exemplified with the EV/EBITDA multiple. Two multiples that are commonly used are the Enterprise Value / Earnings Before Interest Taxes and Amortizations (EV/EBITA) and Enterprise Value / Earnings Before Interest Taxes Depreciation and Amortizations (EV/EBITDA). EV/EBITA has received a broad usage because it is not affected by capital structure, it does not include amortizations, e.g. non-cash write-offs and it includes depreciation since it is a good proxy for future capital expenditures (Koller, Goedhart and Wessles, 2010). According to Koller et al. (2010), the EV/EBITA multiple is calculated as follow:

$$\frac{EV}{EBITA} = \frac{(1-T)(1-\frac{g}{ROIC})}{WACC-g} \quad (4)$$

Where G is growth rate and T is tax rate

However, we will use the EV/EBITDA multiple as we explain in chapter 5. The multiple is affected by the company's growth rate (g), its return on invested capital (ROIC), its cash tax-rate (T) and its weighted average cost of capital (WACC). As shown in table 3.1, where the tax-rate is fixed at 30%, the multiple increases as ROIC increases, increases as growth increases and decreases as WACC increases.

Table 3.1 – How EV/EBITDA changes when its components change

	Enterprise Value to EBITDA	Return on invested capital + depreciation				
		9%	12%	15%	18%	21%
Growth rate	5%	6	8	9	10	11
	6%	6	9	11	12	13
	7%	5	10	12	14	16
	8%	4	12	16	19	22
	9%	N/A	18	28	35	40
WACC	8%	16	29	37	43	47
	9%	8	15	19	21	23
	10%	5	10	12	14	16
	11%	4	7	9	11	12
	12%	3	6	7	9	9

Put in relation to previous discussion on whether SRI is value creating, socially responsible companies should be traded at higher multiples than socially irresponsible companies according to the value-adding view since socially irresponsible companies focus on short-term profits, which prove to be short-lived (Porter & Kramer, 2006). However, according to the cost-based view, socially responsible companies should be traded at lower multiples since being socially responsible is like being punished by taxes (Friedman, 1970). Loughran and Wellman (2011) finds that companies with low EV/EBITDA multiples tend to have higher discount rates and higher stock returns than companies with high EV/EBITDA multiples.

If investors believe that being socially responsible is value-adding (value-destroying) where the net present value of a firm increases (decreases), the future value (cost) of being socially responsible should be discounted into today´s stock price. Since earnings are recognised when they occur, the denominators in our multiples will not change. However, the nominators will increase due to the higher (lower) expectations on future earnings and thereby increasing (decreasing) the multiples.

Market demand effects on multiples

Companies that are publicly traded on a stock exchange can be affected by investors' biases and trends and hence their multiples can differ because of other reasons than pure financial performance. When the demand for a stock is changed, e.g. by being included in or excluded from an index, the stock price of the company is changed and in turn the stock's multiples are

changed (Shleifer, 1986; Coval & Stafford, 2007). This is something that might affect socially responsible stocks multiples since the aggregate demand for socially responsible stocks are higher than for socially irresponsible stocks given that the socially responsible stocks are demanded by both SRI investors and conventional investors.

The demand for socially responsible stocks may also be affected by signalling effects. Renneboog et al. (2008) discusses the positive signalling effect of SRI, where good ESG performance signals good management performance and ultimately improved financial performance. Signalling must be costly to be reliable and this is shown by the extensive information companies produce to show that they are socially responsible in forms of sustainability reports, performance data, organizing SRI events among others (Leland & Pyle, 1977). Another demand effect is analysts' stock recommendations and Iouannou and Serafeim (2010) finds that socially responsible stocks receive more favourable recommendations after 1997 in comparison to the 1993-1997 time period, which may affect the demand for socially responsible stocks positively (Cai & Xu, 2007; Blandón & Bosch, 2009).

Affects of funds' cash in- and outflows

According to Renneboog et al. (2010), the money inflows to SRI funds are not as affected by past negative returns as the inflows to conventional mutual funds are. This can be explained by that SRI investors may have other objectives with their investments than pure financial objectives. These findings are consistent with the idea of SRI investors are making their investment decisions on other bases than just on past financial performance and thereby differing from investors in conventional mutual funds. Further, that SRI investors seem to be less sensitive to negative performance indicate that the aggregate demand for socially responsible stocks are less volatile than the demand for all stocks. This might impose a more constant demand pressure on socially responsible stocks and thereby pushing the prices for socially responsible stocks up.

Incentives to become socially responsible

If socially responsible companies are traded at different multiples than other companies, there might exist incentives for firms to become (stop) being socially responsible to obtain a higher valuation. During the Dot-com bubble in 1997-2000, there were some companies that

changed their descriptions and slightly adjusted their operations to be regarded as Internet companies and thereby obtaining higher valuations. An example is Xcelera.com which was an insurance company and a hotel management company, but turned into being an Internet company and the valuation rocketed to about 12,666 times the sales (Lindroth, 2002; DataStream, 2013). Consequently, if socially responsible firms are valued at higher multiples, the higher multiples might impose false incentives to firms to become socially responsible without truly wanting it and not truly implementing CSR into the firms. The effect of being socially responsible on the wrong bases, according to Porter and Kramer (2006), will be short-lived since the earnings will not increase as expected and consequently will the multiples be normalized again.

Portfolio management

As concluded in the section above, theories suggest that multiples can differ between socially responsible stocks and conventional stocks depending on whether SRI is creating or destroying value. Since portfolio managers try to outperform indices and their competitors, they want to buy undervalued stocks and sell overvalued stocks. If there is a difference in multiples between socially responsible stocks and conventional stocks, portfolio management strategies for SRI funds can differ from portfolio management strategies of conventional mutual funds. Accordingly, when the objectives of investors in SRI funds differ from the objectives of investors in conventional mutual funds, the portfolio management of SRI funds can differ from the portfolio management of conventional mutual funds. Further, Mill (2006) claims that portfolio management strategies and performance must differ between portfolio managers of conventional mutual funds and portfolio managers of SRI funds if there is any difference in risk-adjusted return between conventional mutual fund and SRI funds. Portfolio managers of conventional mutual funds would have to be unaware of the good quality of socially responsible stocks if they performed worse given they have the mandate to invest similarly.

The capital asset pricing model (CAPM) suggests that an investor shall hold a diversified portfolio since investors are not compensated for bearing unsystematic, i.e. diversifiable risk (Sharpe, 1964). However, the CAPM model suggests that portfolio managers can earn higher returns while taking on more systematic risk. If SRI funds are restricted from owning assets in particular industries, they might be exposed to more risk than they will be compensated for,

i.e. the risk-adjusted return will not be higher than for conventional mutual funds (Gil-Bazo, Ruiz-Verdu and Santos, 2010). According to the CAPM, SRI funds might be more willing to invest in less risky assets, i.e. assets with lower discount rates and higher valuation multiples, to compensate for bearing diversifiable risk. There are several assumptions underlying the CAPM and they are that all investors are able to borrow and lend at the same interest rate, investors have homogenous beliefs regarding expected values, standard deviations and correlation coefficients and are that investors are utility maximizing (Sharpe, 1964). Fama and French (1992) comes up with an extended three-factor version of the CAPM model. The two new factors are high-minus-low book to market equity (HML), i.e. the inverse of price to book multiple (P/B), and the small minus big company size factor (SMB). These two variables have greater explanatory power than the CAPM model, which indicates that it is not only the beta that can explain stock returns but also valuation multiples and company size. In the past, small cap stocks with high book to market multiples have outperformed other stocks, which is due to the higher risk of small cap stocks and high book to market multiples. According to Fama and French (1992), SRI funds should invest in low book to market stocks, i.e. high market to book stocks, and in large cap stocks. (Fama & French, 1992)

There are several investment styles that are used by portfolio managers to be able to differentiate from each other and thereby used to be able generate abnormal returns. Investors can generally be categorized as value- or growth-investors depending on their investment styles. The definition of value investing is usually to buy good companies for low prices where Benjamin Graham[2] can be seen as pioneer. A growth-investor can be defined as an investor who pays for future growth and thereby buy stocks at high multiples, e.g. Peter Lynch[3]. Further, different investment styles can be characterized by investing in only small or large cap stocks, which is often linked to being a value- or growth-investor.

Previous studies show that different investment styles generate different returns. Berk (1997) shows that small cap stocks are riskier and hence penalized with higher discount rates that implies lower valuation multiples. Further, the factors of the Fama-French model show that, as stated before, small cap stocks with low market to book multiples outperform index. In line

[2] Benjamin Graham was a pioneer within value investing and author of the book ”The Intelligent investor” where he presents his idea of investing and his famous intrinsic value formula.

[3] Peter Lynch managed the Magellan fund very successfully at Fidelity Investments and has written several books on how to invest in the stock market.

with Fama and French (1992), Basu (1983) finds that the P/E multiple is a good explanatory variable of stock returns where low P/E stocks outperform. However, even though low P/B and small cap stocks generally outperforms index, high P/B and large cap stocks can outperform during certain time periods (French, 2013). Asset allocation, e.g. heavier exposure to certain sectors than indices, can also differ among portfolio managers depending on skills but also depending on which risks a portfolio manager want to be exposed to. During bear markets, many investors rebalance their portfolios to less cyclical companies such as pharmaceutical companies, tobacco companies and drug companies. Depending if socially responsible companies generally trades at higher (lower) multiple than socially irresponsible companies, portfolio managers of SRI funds might have different investment styles than portfolio managers of conventional mutual funds.

Another implication of cash in- and outflows to funds may occur if portfolio managers are paid on the basis of the total amount of asset under management. Investors employ portfolio managers to manage their assets, which creates a contract where agency conflicts may arise if the contract is not perfect. According to Jensen and Meckling (1976), the investors can be viewed as principals and the portfolio managers as agents and if the two parties' incentives are not aligned, agency conflicts will occur. Chevalier and Ellison (1997) finds that there might exist agency problems between portfolio managers (agents) and fund investors (principals). This occurs when the portfolio managers want to increase the return on the portfolio as much as possible to attract new capital while the fund's investors seek to maximize their risk-adjusted returns. If cash in- and outflows of SRI funds are less correlated with past performance as Renneboog et al. (2010) and as the logic of SRI investing suggest, then portfolio managers of SRI funds have less incentives to increase beta to attract new capital in comparison to conventional mutual funds. This discussion implies that portfolio managers of SRI have fewer incentives than portfolio managers of conventional mutual funds to increase returns and thereby there might be less agency conflicts between the portfolio managers of SRI funds and the SRI investors. Consequently, this implies that SRI funds would consist of less risky investments relatively to conventional mutual funds. Brennan and Li (2008) analyse the impact of greater appearance of institutional owning, where the portfolio managers might not have the same objectives as their investors as previously discussed and consequently violating the CAPM's assumption of value maximizing individuals. Brennan and Li (2008) finds that due to higher demand for high-beta stocks than expected by the CAPM, these stocks underperform. Another consequence of agency conflicts

is that investors in conventional mutual funds need to monitor the portfolio managers to a greater extent than investors in SRI funds, which indicate that there exist less agency costs within the SRI fund structure (Jensen & Meckling, 1976).

If SRI funds outperform conventional mutual funds, the explaining variable must be portfolio management performance as stated above. According to portfolio and agency theory, SRI funds are exposed to more unsystematic risk but less exposed to agency conflicts in comparison to conventional mutual funds. This suggests that there might be a difference in investment style between SRI funds and conventional mutual funds.

Construction of hypotheses

From the presented theoretical framework above, we construct three hypotheses. We construct replicating SRI funds from conventional mutual funds by excluding investments regarded to be irresponsible from the conventional funds. This is an important feature of our research since it enables us to test two of our hypotheses where we firstly need to exclude the portfolio manager variable and where we secondly want to test the portfolio manager variable. Further, we compare SRI funds' multiples to conventional mutual funds' multiples and to replicating funds' multiples in order to test our hypotheses. In table 3.2, the different fund types and portfolio managers are shown. The dark grey areas are those funds that exist in reality while the light grey areas are made up.

Table 3.2 – Overview of fund types and portfolio managers (2)

		Fund type	
		Conventional	SRI
Portfolio manager type	Conventional	Conventional fund with conventional portfolio manager Square 1	SRI fund with conventional portfolio manager (i.e. the replicating portfolios) Square 2
	SRI	Conventional fund with SRI portfolio manager Square 3	SRI fund with SRI portfolio manager Square 4

First hypothesis

The first hypothesis will test whether there are any differences in multiples between SRI funds and conventional mutual funds. This hypothesis tests the differences between square 1 and 4 shown in table 3.2.

> H_0: SRI screening does not affect funds' composition of growth and value stocks
>
> H_1: SRI screening does affect funds' composition of growth and value stocks

Second hypothesis

The second hypothesis will examine whether there are any differences in multiples between conventional mutual funds and replicating SRI funds. We construct replicating SRI funds to be able to exclude the portfolio manager variable and thereby examining the true difference in multiples between conventional stocks and socially responsible stocks. This hypothesis tests the differences between square 1 and 2 shown in table 3.2.

> H_0: Socially responsible companies' multiples does not differ from conventional stocks' multiples
>
> H_1: Socially responsible companies' multiples does differ from conventional stocks' multiples

Third hypothesis

The third hypothesis will test whether there are any differences in multiples between SRI funds and our replicating funds. By doing so, we examine whether there is a difference in portfolio management between conventional funds and SRI funds. By creating replicating funds, we are able to compare two similar groups of SRI funds, where portfolio managers of conventional mutual funds manage one of the groups and portfolio managers of SRI funds manage the other group. This hypothesis tests the differences between square 2 and 4 shown in table 3.2.

> H_0: Portfolio managers' investment styles do not differ between SRI funds and conventional mutual funds
>
> H_1: Portfolio managers' investment styles do differ between SRI funds and conventional mutual funds

4 Previous empirical research

As SRI has become increasingly popular, the amount of research on this area has increased too. The research has been focused on investigating why and if SRI funds shall under- or outperform indices and/or conventional mutual funds and this is an interesting area since previous research is not conclusive. The research has come to different conclusions on whether SRI funds under- or outperforms and this is likely due to differences in samples, markets and time periods. The earliest research on SRI investigated the performance of SRI funds and whether their performances were different from the performances of conventional funds or conventional indices (Hamilton, Jo & Statman, 1993; Statman, 2000; Statman, 2007; Cortez, Silva & Areal, 2008). As shown in table 4.1, these papers are not conclusive and are limited by either small sample size, short time horizon or no recognition of different market conditions. Further, the early research on SRI focused mostly on the U.S. and the UK markets.

During the first decade of the 21st century, the research on SRI has changed focus from focusing on explaining SRI performance by analysing stock performance to focusing on variables that can explain different performance. Papers have examined performance during different market conditions and which effects cash inflows have among others. Since the earliest research has not been able to determine whether investors in SRI fund have to give up financial gains for social gains, recent research has taken different approaches, e.g. by investigating certain variables that can explain fund performance. Capelle-Blancard and Monjon (2011) analyses a fund's performance during a period where the fund criteria changed from being a conventional mutual fund to include ESG criteria and becoming a SRI funds. The paper shows that there is no difference in performance between the two different periods.

Recent research also includes research on how cash inflows to funds affect SRI. Renneboog et al. (2010) focuses on cash inflows and shows that SRI investors are less sensitive to past performance since they are more likely to continue to invest in the same funds as in the past. This might mitigate the risk of negative price pressure on SRI funds' holdings and thereby keeping a high and steady demand for SRI funds (Coval & Stafford, 2007; Shleifer 1986).

Another new research area analyses whether SRI stocks perform differently in regards to conventional stocks during different market conditions, such as bull and bear markets. Huimin, Kong and Eduardo (2010), Shank, Manullang and Hill (2005) and Managi, Okimoto and Matsuda (2012) analyse SRI performance during different market conditions. Shank et al. (2005) analyses SRI performance during pre-defined time periods and finds that the best socially responsible stocks outperform during the 10-year period while there is no difference during the three- and five-year periods. Huimin et al. (2010) and Managi et al. (2012) use the Markov switching model to identify two different market regimes, i.e. bull and bear periods, and they find no difference in performance between SRI funds and SRI indices versus conventional mutual funds and conventional indices.

Lastly, we have seen a greater focus of new research on how different investment styles and portfolio management performance may affect SRI performance. Bauer, Koedijk and Otten (2002) and Bauer, Otten and Rad (2006) analyse stock performance with the Carhart (1997) four-factor model that controls for investment style, i.e. small cap versus large cap, low P/B versus high P/B and momentum. Bauer et al. (2002) and Bauer et al. (2006) do not find that the performance of SRI funds differs from conventional mutual funds when adjusted for investment style. Lam, Jacob and Yee (2012) also uses a version of Carhart (1997) when they analyse stock returns of SRI stocks and they do not find any statistical difference either. However, Lam et al. (2012) also investigates how SRI affect market to book values and finds that the better ESG performance the higher multiples. Luther and Matako (1994) and Bauer et al. (2006) show that SRI funds tend to invest in small cap companies rather in large cap companies, indicating there are a difference in investment style between portfolio managers of SRI funds and portfolio managers of conventional mutual funds. However, Eurosif (2006) shows that European SRI funds nowadays tend to invest in large cap stocks where in some countries large cap holdings represent 90 % of the SRI funds. A reason to why SRI funds to a large extent consist of large cap holdings is that the bigger a company is, the more money it can afford to disclose information and be a signatory to different conventions. Kempf and Osthoff (2007) uses a long-short investment strategy to analyse the performance of the highest rated SRI stocks versus the lowest rated. Kempf and Osthoff (2007) creates a strategy that generates abnormal returns by buying the highest rated SRI stocks and selling the lowest rated stocks, indicating that being socially responsible is valuable to companies and investors.

Further, Gil-Bazo et al. (2010), Geczy, Stambaugh and Levin (2005) and Benson, Brailsford and Humphrey (2006) analyse fund management performance and find empirical evidence of both under- and outperformance of portfolio managers of SRI funds. Gil-Bazo et al. (2010) finds that SRI funds perform better than conventional mutual funds and this difference in performance is explained by the outperformance by asset management companies specialized in SRI. Benson et al. (2006) finds that there are differences in asset allocation between SRI funds and conventional mutual funds but there is little difference in stock-picking ability when analysing estimated alpha. Geczy et al. (2005) creates two portfolios, one consisting of the best performing SRI funds and another one consisting of the best performing conventional mutual funds, and finds that the portfolio of conventional mutual funds performs better. Lastly, Ioannou and Serafeim (2010) analyses equity research analysts' recommendations and shows that SRI stocks receive more favourable recommendations than conventional stocks, which can affect SRI stocks valuations positively.

We believe that our paper will contribute to previous research by investigating the effect SRI has on multiples and investment style, an approach we have not seen anyone use before. As this chapter concludes, the research has gone from analysing stock performance to analysing fund management performance and demand effects, such as cash inflows and analyst recommendations. We believe it is interesting to analyse whether the benefits of being socially responsible is directly incorporated into today´s stock price, as DCF analysis suggests. We therefore believe this to be a better method than previous research has used since the effects of market demand and valuation methods are captured when analysing valuation multiples. Further, we include the portfolio management performance variable, which has been overlooked by some of the previous research. This is an interesting variable since it can be the missing piece to explain why previous research has come to different conclusion in regards to differences in risk-adjusted returns. As stated before, if SRI funds would outperform conventional mutual funds, the explaining variable must be the portfolio management variable given that the only discriminative investment criteria is SRI. Depending on our research's outcome, it can impact investment managers, company managements' incentives of becoming socially responsible and can be a valuable contribution to understand previous research.

Table 4.1 – Review of previous research

Year	Study	Country	Fund sample	Benchmark	Period	Findings
1993	Hamilton et al.	U.S.	32	Conventional index	1981-1990	SRI does not affect expected stock returns or companies' cost of capital
2000	Statman	U.S.	Index	Conventional index	1990-1998	The SRI index performed as well as the conventional index
2002	Bauer et al.	DE, CH and U.S.	56	Conventional index	199X-2002	No significant difference
2005	Shank et al.	U.S.	32	Conventional index	1993-2003	Market does not price SRI in the short run but evidence that it does for the long run
2005	Kreander er al.	Europé	40	Conventional funds	1996-1998	No significant difference in financial performance
2005	Geczy et al.	U.S.	106	Conventional funds	2001-2003	Optimal SRI portfolio underperforms optimal conventional portfolio
2006	Mill	UK	1	None	1982-2004	No difference in performance when changing investment style to SRI
2006	Bauer et al.	Austalia		Conventional funds	1992-2003	No difference in performance when adjusting for investment style
2006	Benson et al.		185	Conventional funds	1994-2003	Difference in exhibited industry betas and little difference in stock-picking ability
2007	Statman	U.S.	8	Conventional index	1987-2006	SRI funds lagged the conventional index
2007	Kempf & Osthoff	U.S, DSI	2 Indices	Conventional and SRI indices	1992-2004	Buying high rated SRI firms and selling low rated generates abnormal returns
2008	Cortez et al.	Europé	88	SRI indices	1996-2007	The performance of SRI funds are comparable to conventional and SRI indexes
2010	Huimin et al.	U.S.	3 Indices	Conventional index	2001-2009	No difference in risk-adjusted return during three different market periods
2010	Weber et al.	Global	229	Conventional index	2002-2009	Significant higher results of the SRI portfolio than the MSCI index
2010	Gil-Bazo et al.	U.S.	86	Conventional funds	1994-2005	Specialized SRI investors outperforms
2010	Ioannou and Serafeim		Stocks	None	1993-2008	SRI stocks face an increase in favourable recommendation
2010	Renneboog et al.	Global	321	Conventional funds	1992-2003	SRI investors are less sensitive to past performance
2011	Capelle-Blancard	France	175	None	2004-2007	Higher screening intensity led to lower returns
2012	Managi et al.	U.S., UK and Japan	4 Indices	Conventional index Conventional and	2001-2008	No difference in performance during bear and bull regimes
2012	Shunsuke et al.	U.S., UK and Japan	3 Indices	SRI indices	2001-2008	No difference regarding mean and volatility between SRI and conventional indexes

5 Method and Data

In this chapter, we present the method we use to test our hypotheses and the data sample we use. Firstly, we present our method and how we construct our replicating portfolios. Secondly, we discuss our data sample and the limitations of our data.

Method

Method to test hypotheses

Previous studies have focused on risk-adjusted stock returns and they have therefore used models that enable the user to test such hypotheses, e.g. by calculating and comparing the alpha of SRI funds and conventional mutual funds. An interesting method is used by Bauer et al. (2006), who constructed an own version of the 4-factor model used in Carhart (1997) to explain the performance while adjusting for investment styles of SRI funds. However, Bauer et al. (2006) focused on performance and not on composition. Another interesting method is used by Lam et al. (2012) when analysing price to book valuations of stocks. Lam et al. (2012) used a model where the following factors are used: environmental, social and governance performance indicators, age of the firm and the return on equity ratio to explain market to book values. This method enables the user to analyse if socially responsible performance is priced into equity valuation but it does not enables the user to test differences in composition of funds or investment styles. Lastly, we could have analysed differences in multiples by comparing SRI indices to conventional indices. However, these indices use positive screening and not negative screening as most SRI funds use and therefore is this method not as good as the method we have chosen to use.

We use the method which Stenström and Thorell (2007) uses to test risk-adjusted returns and portfolio management performance. This method enables us to analyse the composition of valuation multiples and investment styles of funds by controlling for the portfolio management variable. Further, we believe this method to be more suitable to analyse funds' compositions of valuation multiples rather than analysing risk-adjusted returns with e.g. Jensen's alpha. Jensen (1968) presented the Jensen's alpha equation and is shown below in equation 5. The equation explains the returns of portfolios and when a portfolio generates abnormal returns, i.e. alpha, in regards to what is expected by the CAPM, the difference is positive. When creating the replicating portfolios, stocks are excluded from the conventional

mutual funds. This means that the funds' beta compositions, correlations and covariance are changed and potentially, portfolio managers' hedges are cancelled out. As a consequence, the exclusion of stocks may affect the funds' investment styles to generate alpha and thereby presenting a less true picture of the portfolio managers' performance. In contrast, the funds' composition of mean values are analysed when comparing the funds' composition of high and low multiple stocks and thereby presenting a better picture of the portfolio managers' stock choices than when analysing Jensen's alpha.

$$\alpha_{\mathrm{i}} = R_{\mathrm{i}}\,[R_{\mathrm{f}} + \beta_{\mathrm{iM}}\,x\,(R_{\mathrm{M}} - R_{\mathrm{f}})] \tag{5}$$

Where α_j is alpha

When we collected our data, we firstly collected the funds' half-year holding data over our time period from Finansinspektionen (Finansinspektionen, 2013). Since half-year data is used, the holdings are assumed to be constant during the half-year period to be able to calculate the aggregated multiples. Secondly, we collected the monthly P/E, P/B and EV/EBITDA multiples on the holdings from DataStream (DataStream, 2013). Thirdly, we calculated the funds' monthly aggregated multiples over the time period by using equation 6. We collected data on the three groups of funds, i.e. the SRI funds, the conventional mutual funds and the replicating portfolios, to be able to test the composition and investment styles of SRI funds relatively conventional mutual funds while controlling for portfolio management. When the data was collected we, we tested the differences between the groups with the independent t-test. The t-test is a hypothesis test designed to test differences in mean values between two independent populations where the standard deviation is not known. If the probability of a false null hypothesis is less than a certain value, e.g. 5 %, the null hypothesis is rejected. The most commonly used significant levels are 1%, 5% and 10%.

$$M_{\mathrm{p}} = \sum_{i=1}^{N} w_{\mathrm{i}}\; x\, M_{\mathrm{i}} \tag{6}$$

Where M_P is a portfolio's mean value multiple, w_i is a stock's weight in the portfolio and M_i is a stock's multiple

The three multiples we used when analysing composition and investment styles are P/E, P/B and EV/EBITDA. The EV/EBITDA multiple is more commonly used than EV/EBITA by practitioners and we use this multiple since it is the one which is used in DataStream. We believe that it is an adequate multiple to use even though the cost of previous investments is

not included, i.e. depreciation. When depreciation is excluded, the variable for future investments is not included in the valuation and thereby a complete analyse of valuation creation is not possible. However, this multiple enable us to analyse companies independent of capital structure which our two other multiples, P/B and P/E, do not.

The two other multiples P/E and P/B are market equity based and do not include enterprise value such as the EV/EBITDA multiple does. These two multiples are commonly used to compare stock valuation among companies since they are easy to calculate and to interpret. There are several limitations of these multiples, e.g. they take capital structure into consideration and/or they include amortization. We choose to analyse these multiples since previous research proves that they are good explanatory factors of stock returns and are commonly used and well known to all investors and many private investors. P/B, together with firm size and beta, has great explanatory power of stock returns according to Fama and French (1992) and Basu (1983) finds that P/E also has great explanatory power of stock returns. However, as Fama and French (1992) discusses, the HML and SMB factors seem to cover the same explanatory power of P/E and does therefore not include the P/E multiple in its three factor model. Lynch and Rothschild (2000) and Fisher (2003) discuss the importance of these two multiples when judging valuation of stocks in their guides to investing to private investors. Since these are that well recognized and used as screening tools for investments, we believe it is important to include these multiples to be able to analyse portfolio managers' investment styles.

The P/E multiple is defined as follows:

$$\frac{Total\ market\ value\ of\ equity}{Total\ earnings} \tag{7}$$

This multiple is largely affected by the expectation of future performance, where expectation of better (worse) performance generates a higher (lower) multiple.

The P/B multiple is defined as follows:

$$\frac{Total\ market\ value\ of\ equity}{Total\ book\ value\ of\ equity} \tag{8}$$

This multiple is also to a large extent affected by future performance, where expectation of better (worse) performance generates a higher (lower) multiple. Further, the higher return on equity (ROE), the higher the multiple will be and therefore will companies with high leverage have higher ROE than companies with lower leverage, all other equal. Table 5.1 below shows the effects ROE has on P/B when equity valuation is equal to 10 times the earnings (the P/E is equal to 10). ROE is calculated as follow:

$$ROE = \frac{Earnings}{Total\ book\ value\ of\ equity} \tag{9}$$

Table 5.1 – How P/B and ROE change when their components change

Price to book		Book value				
		30	**40**	**50**	**60**	**70**
Earnings	**5**	1,7	1,3	1,0	0,8	0,7
	10	3,3	2,5	2,0	1,7	1,4
	15	5,0	3,8	3,0	2,5	2,1
	20	6,7	5,0	4,0	3,3	2,9
	25	8,3	6,3	5,0	4,2	3,6
Return on equity						
Earnings	**5**	17%	13%	10%	8%	7%
	10	33%	25%	20%	17%	14%
	15	50%	38%	30%	25%	21%
	20	67%	50%	40%	33%	29%
	25	83%	63%	50%	42%	36%

Construction of replicating portfolios

The replicating portfolios were created by using a negative screening where the conventional mutual funds were screened for the socially irresponsible stocks shown in appendix 1. We choose to use a negative screening since most SRI funds use a negative screening (Eurosif, 2012). Another reason for choosing a negative screening is that negative screening processes are more objective and standardized while positive screening is more subjective and can differ more from fund to fund. Further, the best performing socially responsible stocks are usually big companies since they can afford it and therefore it is better to use an exclusive method to limit the bias towards large companies that have higher multiples. The socially irresponsible stocks were excluded from the funds' holdings and thereby decreasing the funds' numbers of holdings and the amounts under management. By doing this, the portfolios only consist of socially responsible holdings and the funds' multiples only represent the aggregated sum of

the socially responsible stocks' multiples. However, one limitation of this method is that the replicating portfolios do not represent the true holdings of the portfolio managers.

Data

In this section, we firstly discuss our data and which criteria we applied when choosing our data. Secondly, we discuss the limitations of our data.

Selecting funds

In order to test the three hypotheses, we use ordinary SRI funds, replicating portfolios that are constructed by using conventional mutual funds that have been screened for unethical investments and conventional mutual funds. The replicating portfolios will give the analysis another dimension and will be used to test how portfolio managers' investment decisions are affected by the multiples the firms are traded on.

We wanted to perform an analysis that provides a new perspective on SRI funds and hence we focused on funds marketed in Sweden. Previous research has to a large extent focused on funds that have been marketed mostly in the UK and the U.S. The Swedish SRI market is well developed where many SRI funds exist but is not as thoroughly analysed as the UK and the U.S. markets. Further, another advantage of studying the Swedish market is the well-documented holding data which all Swedish funds need to report to the government controlled agency Finansinspektionen (Finansinspektionen, 2013). We decided to use Finansinspektionen's data in order to make sure that we could rely on the data presented as well as being able to find complete dataset on the funds' investments. Finansinspektionen presents quarterly data on the funds' holdings and we decided to use data half-year in our analysis due to time constrains. Using half-year data instead of quarterly data will not affect the robustness of the dataset since the funds have long-term engagements in their investments.

In order to be able to construct the replicating SRI funds out of the conventional mutual funds, we excluded investments that are listed either at Norges Bank Investment Management's or Sjunde AP fonden's (AP7) lists over socially irresponsible firms shown in appendix 1 (Norwegian Government, 2013; Sjunde AP-fonden, 2013). AP7 has developed a norm-based screening and do not invest in firms that contradict against any convention that Sweden has signed. AP7 started with SRI in 2001 when the Swedish Government stated that

the fund should take ethical and environmental performance of companies into consideration when investing (AP7, 2001). Norges Bank Investment Management manages the Government Pension Fund Global, or also called Norwegian Oil Fund (NOF), and in the management of the Norwegian Oil Fund, a council of ethics was established in 2004. The council has set up an ethical guideline and recommends the Ministry of Finance in Norway whether to exclude a company from the Norwegian Oil Fund's investment universe. We believe both the AP7 and the Norwegian Oil Fund to be reliable sources, pioneers within SRI and two of the biggest players within the SRI market and consequently, good resources to use when creating our replicating portfolios. Since we analyse Swedish funds where the SRI funds' screening processes may be influenced by the Swedish and/or Nordic culture, we believe it is important to screen the replicating funds on the same basis as the SRI funds were screened. Another advantage of AP7's and the Norwegian Oil Fund's lists are that they are public and the exclusions of companies are motivated. Further, these lists enable us to use a negative screening instead of a positive screening process.

Here follows motivations to why three companies of the excluded companies have been excluded by Norwegian Oil Fund and Sjunde AP fonden:

> **Boeing** is excluded due to production of cluster munitions and due to being involved in nuclear weapons.
>
> **DongFeng Motor** is excluded due to sale of weapons and military material, thereby violating human rights, to Burma.
>
> **Wal-Mart** is excluded due to serious or systematic human rights violations and anti-trade union acting in the U.S.

The funds we focused on in our analysis are SRI funds that have an international investment scope, since all Swedish firms except one, Swedish Match, is considered to be ethical according to AP7 and Norwegian Oil Fund. Due to our method, we needed to analyse regions where there are more than one company deemed to be socially irresponsible. Consequently, we excluded all funds with investment universes limited to the Swedish and Nordic markets and focused on funds with European, Global and North American investment universes. The geographical split over the different types of funds that we are analysing is shown in table 5.2.

Table 5.2 – Geographical split of the selected funds

Geographical focus	**Fund type**	
	SRI	Conventional
North America	7.7%	6.7%
Europe	23.1%	46.7%
Global	69.2%	46.7%

When we selected which funds to use in the analysis, we started with Finansinspektionen's list over funds and then excluded funds that did not meet our requirements shown in Table 5.3 (Finansinspektionen, 2013). We decided to build our analysis on empirical data from 2008 to 2012, to make sure that we covered both bull and bear market conditions. We wanted to cover both bull and bear markets to make sure that we did not test our hypotheses during any kind of specific market condition. Out of the funds presented at Finansinspektionen, some funds have been started and/or ended during the time period and there are funds that have merged. To make our analysis consistent, we only included those funds that have been active during the whole period and the rest were excluded from our analysis. Another criteria was that a portfolio manager must actively manage the fund, otherwise the fund follows an index and portfolio manager cannot affect the investment decisions. To make sure that we analyse portfolio managers' decisions instead of an index, the funds with passive portfolio managers were excluded from our fund sample. For a SRI fund to be regarded as actively managed, it must actively take SRI criteria into consideration when investing. Since we study the funds' valuation multiples, we selected funds with at least 75 % of total assets under management invested in equities, which is Morningstar's definition of an equity fund (Morningstar, 2013). When the funds' investments where collected, we used DataStream to find the valuation multiples and later on we calculated funds' aggregated multiples in Excel.

Table 5.3 – Criteria when choosing funds

Fund criteria	**Type of fund**		
	SRI funds	Conventional mutual funds	Replicating funds
Equity > 75 %	✔	✔	✔
Active management	✔	✔	✔
International focus	✔	✔	✔
Complete dataset	✔	✔	✔
SRI screening	✔		✔
Non-specific	✔	✔	✔

When we selected the SRI funds, we started with the European, Global and North American funds included on Finansinspektionen's list (Finansinspektionen, 2013). Then we excluded funds that do not use SRI screening in their investment decision process from the list by controlling the funds' fact sheets and their presentations on Morningstar. The funds we included in our dataset for SRI funds use different kinds of screening, i.e. the portfolio managers use both negative and positive screening in their investment decision process. In table 5.4 we present the funds that we decided to use in our analysis and their different characteristics, such as they are actively managed, how they screen their investments and the percentage of equities among others. The European, Global and North American funds that did not have any constrains regarding ESG performance but met the requirements shown in table 5.3 where included in the dataset for conventional mutual funds.

Table 5.4 – Screening types for the selected SRI funds

Fund name	Fund characteristics		Screening					
			Positive	Negative				
	Equities	Fund Management		Environ-ment	Social	Ethical	Sin	Gover-nance
SEB Etisk Globalfond	~ 100 %	Active		X	X	X	X	X
Banco Etisk Europa	~ 100 %	Active		X	X	X	X	X
Nordea Etisk Urval Global	~ 100 %	Active		X	X	X	X	
DNB Utlandsfond	~ 100 %	Active	X		X	X	X	X
SPP Aktiefond Global Sustainability	~ 100 %	Active		X	X	X		X
KPA Etisk Aktiefond	>75 %	Active		X	X	X	X	X
Folksam Globala Aktiefond	>75 %	Active		X	X	X		X
Aktie-ansvar Europa	>75 %	Active					X	
Öhman Etisk Index Europa	~ 100 %	Active			X		X	
Öhman Etisk Index USA	~ 100 %	Active			X		X	
Danske Invest SRI Global	~ 100 %	Active					X	
Swedbank Robur Ethica Global Mega	~ 100 %	Active		X	X	X	X	X
Swedbank Robur Ethica Sverige-Global	~ 100 %	Active		X	X	X	X	X

Limitations of data

As with all data, our data is not perfect and we have identified the following weaknesses of our data:

Multiples: Since we assess the equity market values, firms with periodically extremely low earnings can have extreme multiples, for example if they grow in a rapid pace or due to extremely rare low earnings. Examples are the ING Group that had EV/EBITDA of more than 1,000 during late 2008 and the Arytzta Group that had P/E of 13,105.7 during September – December 2012 (DataStream, 2013). Such investments have been excluded since their impact on the fund's multiples

are not proportional to their size. Therefore, we use three different multiples, EV/EBITDA, P/E and P/B, which all have different characteristics that bring different dimensions to the analysis.

Frequency: We decided to use half-year data since the data collection where massive and would have taken too long if we where to assess quarterly data. Using half-year data instead of quarterly will not weaken our robustness too much since most of the funds have a long-term horizon on their investments.

Funds: When choosing conventional mutual funds that we will create replicating SRI funds from, we had to choose funds that contain holdings that are listed on AP7's or Norwegian Human Rights Fund's lists. This gives fewer funds to choose from and limits our analysis.

Home bias: SRI funds tend to have a bigger home bias than conventional mutual funds and hence the funds do not have the same geographical exposure (Bauer, 2006).

Geography: Due to relatively fewer European SRI funds compared to global funds than conventional mutual funds, the results might be biased by differences in multiples between the European investment universe and the global investment universe. However, we believe it to be important to include all funds rather than excluding global funds to gain a better European vs. global funds ratio.

6 Results

In this chapter we present the results from the empirical study. This chapter is divided into four sections where the first three sections present and discuss the results from the empirical analysis in the same order as the hypotheses previously where presented. The chapter's last section will present and discuss how the robustness of our results is tested and the results of the test.

Hypothesis 1

In table 6.1, the results from the first hypothesis test are shown. The first hypothesis tests whether there are any differences in multiples between conventional mutual funds and SRI funds. The results are derived from the data shown in appendix 2 and each fund's individual multiples are shown in appendix 3. Table 6.1 shows that there are significant differences in multiples between conventional mutual funds and SRI funds. As the t-values are high, all differences are significant at the 5 %-level and the difference in P/B is also significant at the stronger 0.5 %-level. If a t-test is significant the null hypothesis is rejected, hence there are differences in multiples between SRI funds and conventional mutual funds. Therefore, we can conclude that SRI funds are constructed of stocks with higher multiples than conventional mutual funds over all three multiples. These results imply that there might be 1) differences in valuation of socially responsible stocks relatively to conventional stocks and/or 2) differences in portfolio management. Further, these results indicate that SRI funds are structurally different from conventional mutual funds, which is essential to this study. However, as discussed before, it is hard to derive any conclusions at this point since we need to examine what these differences consist of.

In appendix 4, the differences in multiples between SRI funds and conventional mutual funds are shown (SRI funds minus conventional mutual funds). The second chart shows that SRI funds allocate their assets to higher P/B stocks than conventional mutual funds during all time periods except during the period when the stock markets hit their lowest for our time period, i.e. when the financial crisis broke out. This pattern holds for all three analysed multiples as the charts show.

Table 6.1 – Results from hypothesis 1

Independent t-test	Mean value	T-value	Probability
Price to earnings			
Conventional mutual funds	15,42	-1,985082	0,0495
SRI funds	16,21		
Price to book			
Conventional mutual funds	2,64	-3,809144	0,0002
SRI funds	2,83		
EV to EBITDA			
Conventional mutual funds	10,33	-2,175212	0,0316
SRI funds	10,66		

Hypothesis 2

In table 6.2, the results from the second hypothesis are shown. The second hypothesis tests the differences in multiples between conventional mutual funds and the replicating portfolios, thereby holding the portfolio management variable constant and only testing for potential differences in stock valuation. The results show that there are only very small differences in mean values between conventional mutual funds and our replicating mutual funds. The largest difference in multiples is in the P/B multiple where conventional mutual funds are constructed of stocks with higher multiples than replicating portfolios. However, since the t-values are low, none of the differences are significant and we can therefore not reject the null hypothesis. These results indicate that there are no differences in valuation multiples between socially responsible stocks and socially irresponsible stocks. Further, this indicates that investors do not value companies that are socially responsible differently from companies that do not act and or do not show that they are socially responsible. Therefore, the differences in multiples between conventional mutual funds and SRI funds cannot be explained by differences in stock valuation between socially responsible companies and socially irresponsible companies. The differences in valuation multiples between SRI funds and conventional mutual funds must therefore be due to differences in investment styles, which the third hypothesis tests.

Table 6.2 – Results from hypothesis 2

Independent t-test	Mean value	T-value	Probability
Price to earnings			
Conventional mutual funds	15,42	-0,246318	0,8059
Replicating portfolios	15,53		
Price to book			
Conventional mutual funds	2,64	1,161345	0,2478
Replicating portfolios	2,59		
EV to EBITDA			
Conventional mutual funds	10,33	-0,838734	0,4033
Replicating portfolios	10,46		

Hypothesis 3

In table 6.3, the results from hypothesis 3 are shown. The third hypothesis tests the differences in multiples between SRI funds and the replicating portfolios, thereby testing for the portfolio management variable and holding the potential differences in stock valuation between socially responsible and socially irresponsible companies constant. Table 6.1 shows that there are differences in multiples between SRI funds and the replicating portfolios but only one out of the three tests are significant at the 5%-level. The P/B multiples differ the most where SRI funds are constructed of stocks with higher multiples and the differences are significant at the 0.5 %-level. Since the differences in P/B values are significant, we can reject the null hypothesis that says that there are no differences in multiples between SRI funds and replicating portfolios. There are also differences in P/E but they are not strong since they are only significant at the 10 %-level. The differences in EV/EBITDA are not significant and therefore can the null hypothesis not be rejected. These results indicate that there are some differences in investment styles between SRI portfolio managers and portfolio managers of conventional mutual funds where SRI portfolio managers invest in stocks with higher multiples.

As there are no differences in valuation between socially responsible companies and socially irresponsible companies, the differences in the construction of SRI funds and conventional mutual funds found when testing hypothesis 1 are explained by the differences in investment

styles. The differences in investment styles are not due to the screening process since there where no differences in stock valuation between socially responsible and socially irresponsible companies. Therefore, the portfolio managers of SRI funds' investment styles differ from the portfolio managers of conventional mutual funds' investment styles.

Table 6.3 – Results from hypothesis 3

Independent t-test	**Mean value**	**T-value**	**Probability**
Price to earnings			
SRI funds	16,21	1,685577	0,0945
Replicating portfolios	15,53		
Price to book			
SRI funds	2,83	4,90711	0,0000
Replicating portfolios	2,59		
EV to EBITDA			
SRI funds	10,66	1,296509	0,1973
Replicating portfolios	10,46		

Robustness Test

One of the assumptions of the t-test is that the residuals are normally distributed. To test this, we have decided to use the Jarque-Bera test. The Jarque-Bera tests whether the residuals are normally distributed, i.e. whether data is skewed and/or the kurtosis of data. The null hypothesis of the test is that the data is normally distributed and the hypothesis should be rejected if the p-value is low, i.e. significant at the 5 %-level. In table 6.4, we show the Jarque-Bera test's results for the three groups of funds and for each group of fund the three different multiples. As the table shows, the null hypothesis of normal distribution is not rejected in any case. Therefore, the residuals are normally distributed and our t-test results are robust.

Table 6.4 – Results from robustness test

Jarque-Bera Test	**Value**	**Probability**
Price to earnings		
Conventional mutual funds	2,097003	0,350462
Replicating portfolios	1,425686	0,490248
SRI funds	5,212912	0,073796
Price to book		
Conventional mutual funds	1,17186	0,556588
Replicating portfolios	1,124077	0,570046
SRI funds	1,124077	0,570046
EV to EBITDA		
Conventional mutual funds	3,396247	0,183027
Replicating portfolios	4,42542	0,109404
SRI funds	5,08888	0,078517

7 Analysis

In this chapter, we firstly discuss and analyse the results of the empirical study in relation to the theoretical framework. Secondly, we discuss generalizability, how our research fits within previous research and lastly we discuss the practical implications the results have to stakeholders such as portfolio managers and investors in funds. Thirdly, we discuss what further research can focus on.

Discussion of Empirical Results

Firstly, we discuss the empirical results on company level, i.e. whether it is valuable to be socially responsible. Secondly, we discuss the results in relation to portfolio management theory.

Value Creating on company level

The results from the three hypotheses state that there are differences in valuation multiples between SRI funds and conventional mutual funds. However, these differences are not due to differences in expected value creation between socially responsible companies and socially irresponsible companies. The results from the second hypothesis show that there are no differences in valuation multiples between socially responsible stocks and socially irresponsible stocks. The differences in valuation multiples between SRI funds and conventional mutual funds are explained by the third hypothesis, which finds that there are differences in investment styles. Further, this implies that the screening process of SRI funds do not have any impact on how portfolio managers of SRI funds construct their portfolios of growth or value stocks since there are no difference between socially responsible and socially irresponsible stocks in terms of valuation.

As stated in the theoretical framework, the market pushes up valuation multiples for companies that are expected to generate higher earnings. Since valuation multiples are market and expectation driven, we can conclude that investors do not expect socially responsible companies to generate excess or shortage returns in comparison to socially irresponsible companies. Our findings are in line with previous research, which have shown that there are no differences in generated returns between socially responsible and socially irresponsible companies. Therefore, we can conclude that the investors do not either expect there to be any

differences in returns or do not receive any different returns from investing responsibly. If the investors' expectations where wrong, there would be differences in stock returns, but as previous research shows there are not. This means that there are no differences in expected or realized returns between being socially responsible and being socially irresponsible.

We can also conclude from the second hypothesis that there are no demand effects on socially responsible stocks' valuation. However, this might be due to our method where we chose an negative screening process and where the number of stocks that had to be more demanded than socially irresponsible companies is high. A suggested method would be to analyse differences in multiples with a positive screening process where the best performing socially responsible companies would be compared to all the others. As a consequence of our findings, we did not find there to be any incentives for companies to become socially responsible to obtain a higher market valuation.

Another finding is that there are no signalling effects for companies to be socially responsible since there are not any differences in valuation between socially responsible and socially irresponsible companies. Many companies invest heavily to be able to disclose what actions they have taken to show that they are acting socially responsible. Our empirical findings show that there are no benefits of taking these costs since the valuation of socially responsible stocks are not different from socially irresponsible stocks and this is due to investors do not acknowledge the effort. Being socially responsible is not only a signal to investors but also to other stakeholders such as customers and suppliers. Our findings, and previous research as well, indicate that these other stakeholders do not generally rather choose to cooperate with a socially responsible partner than a socially irresponsible partner. If they would prefer to work with socially responsible partners, the socially responsible companies would have a competitive advantage relatively socially irresponsible companies and thereby greater possibilities of higher margins.

Even tough we did not find any differences in valuation multiples and previous research has not find any differences in stock returns, we believe that the results still are important. They indicate that investors in SRI funds do not have to give up any risk-adjusted stock return when investing in SRI funds and that SRI funds in fact are different from conventional mutual funds. If acting socially responsibly would be value destroying on company level, socially responsible companies would be outcompeted in the long run. Further, the results may

encourage SRI funds to improve their screening processes. Many funds use negative screening and only few use a positive screening process. Today, many funds have the criteria such as: must disclose information on emissions, have to decrease its environmental footprint, increase the rate of women in leading positions etc., which are not per se value creating. A change in screening process and investment criteria might be needed to enable SRI funds with the right tools to be able to outperform. Porter and Kramer (2006) and Hellsten and Mallin (2006) discusses this problem where just transferring money to charity for the sake of it without any good reasons, are not in line with being socially responsible and will not create value for socially responsibly companies. Interestingly, this is also what Friedman (1970) discusses when he says that company philanthropy can be compared to taxes and just spending the shareholders' money.

Portfolio Management

As concluded in the previous section, the portfolio management variable is the explaining variable to why SRI funds consist of stocks with higher multiples than conventional mutual funds. There might exist several theories that can explain why portfolio managers of SRI funds choose to invest in stocks with higher multiples, i.e. less risky stocks, than portfolio managers of conventional mutual funds. As concluded in the theoretical framework, investors in SRI funds do not have exactly the same objectives as investors in conventional mutual funds where one of the differentiating objectives is the return. Investors in SRI funds are less affected by historical performance and thereby are the cash in- and outflows of SRI funds less correlated with historical performance. The incentives of portfolio managers and investors in SRI funds are more aligned in comparison to the incentives of portfolio managers and investors in conventional mutual funds and consequently there are less agency conflicts within the SRI fund structure. Portfolio managers of SRI funds do not need to outperform as portfolio managers of conventional mutual to be able to retain the assets under management or to attract new capital. As a consequence, portfolio managers of SRI funds do not need to take on as much risk as portfolio managers of conventional mutual funds to attract new capital and can therefore instead invest in less risky assets. Compensation can therefore be one of the explaining variables to why portfolio mangers of SRI funds choose to invest in less risky assets.

Further, investors in SRI funds may seek to invest in socially responsible companies to avoid certain risks, such as the British Petroleum oil leakage, since some of the objectives of being socially responsible are to better control companies' risks and operations. As concluded in the previous section, there are not any differences in valuation or returns between socially responsible and socially irresponsible companies. Therefore, it can be a good way for portfolio managers of SRI funds to invest in less risky assets to evoke an image of SRI funds to be less risky and thereby taking more responsibility.

SRI funds limit their investment universe and, as stated before, this is something they will not be rewarded for according to the CAPM. SRI funds retain too much unsystematic risk when they are limiting their investment universe and investing in less risky assets, e.g. in stocks with low betas, can be a way to cancel out the risks of holding unsystematic risk. Consequently, SRI funds are punished with structurally lower risk-adjusted stock returns according to the CAPM and if SRI funds generally perform as well as conventional mutual funds, SRI funds' investment styles must perform better than conventional mutual funds. This implies that high multiple stocks must be outperforming since SRI funds perform as well as conventional mutual funds and/or that conventional mutual funds do not get paid for their risk-taking. This can be related to the discussion of Brennan and Li (2008), which state that portfolio managers of conventional mutual funds' demands for high-risk stocks differ from what the CAPM expect. Further, our findings together with previous research suggest that high-risk stocks may not pay off as well as expected by the CAPM, which also is in accordance with Brennan and Li (2008). According to the Fama-French model, SRI funds should invest in high market to book stocks, which we also find. Further, this is in line with the expectation of that portfolio managers of SRI funds invest in low-risk stocks due to their compensation is not as strongly linked with returns.

Previous research has come to different conclusions on whether SRI funds under- or outperforms. The fact that portfolio managers of SRI funds invest differently from portfolio managers of conventional mutual funds can be an explaining variable where growth investing can be more (less) rewarding during different time periods. This is shown by Fama-French's three factors where high P/B large cap stocks outperform during some time periods (French, 2013). Further, the results are in line with Mill (2006) that also have come to the conclusion that it must be different investment styles that explain differences in performance and not that being socially responsible creates greater value for companies and their investors. We have

also seen that SRI funds do not rebalance their portfolios in the same manner as conventional mutual funds do during bear markets, as shown in appendix 4. Conventional mutual funds choose to invest in less risky stocks than SRI funds during the bear market which our time period grasps. It is hard to determine why SRI funds do not rebalance to even safer assets, or at least as safe as the ones of conventional mutual funds. Some explanations can be that portfolio managers of SRI funds have fewer incentives to actively manage their portfolios or that they might have longer investment horizons among others.

As we stated in our theoretical framework, SRI funds use a different investment process where companies are screened on ESG performance, which differs them from conventional mutual funds. However, according to our results it is not the screening process that accounts for the difference in valuation multiples between SRI funds and conventional mutual funds but the investment styles. This is interesting since the process of screening companies on how well they perform on different ESG criteria is costly and something they do not get paid for. The screening process can be viewed as a signalling tool that shows that the asset manager takes responsibility when investing, which is an important marketing tool when targeting investors to SRI. As discussed in previous section, the screening process may have to be modified to be able to achieve higher returns. However, it is questionable whether this is in the interest of the portfolio managers and the investors.

Implications

In this section, we firstly discuss the generalizability of our results. Secondly, we discuss our results in relation to previous research. Lastly, we discuss how practitioners may benefit from our findings.

Generalizability

Our research is valid for the Swedish asset management market since we have restricted our research to asset management companies and funds that are marketed and established in Sweden. Further, our research is valid for the chosen time period from 2008 to 2012 and for listed companies. We find that there exist differences in investment styles between SRI funds and conventional mutual funds. We can therefore argue that these differences exist, at least in a part of the global market and thus it would be interesting to analyse in a more global context. However, we do not find any differences in valuation multiples between socially

responsible and socially irresponsible companies and we can therefore not argue that this relationship is true for all markets or that differences in valuation between socially responsible and socially irresponsible stocks do not exist anywhere. Further, we use norm-based screening where we have used the AP7 and the Norwegian Oil Fund's screenings and therefore is our screening valid for Swedish and Norwegian SRI markets and not necessarily valid for asset managers outside these two countries.

Previous research

Our finding of no differences in stock valuation between socially responsible and socially irresponsible companies is in line with previous research, which has not been able to be conclusive whether socially responsible companies under- or outperform. Further, we find that SRI funds are different from conventional mutual funds in regards of investment styles but the differences are not due to the screening process which SRI funds use. Some previous papers have questioned whether SRI funds actually are different from conventional mutual funds and we find that they are. We can also see that many funds use an negative screening process where the worst ESG performers are excluded. Thus, many companies are viewed to be socially responsible. Our findings contradict the findings of Lam et al. (2012) who finds that high ESG performance leads to higher P/B valuation. However, the differences in findings can be explained by different methods where Lam et al. (2012) analyse companies' rated ESG performance and our thesis analyse negative screening.

The findings of different investment styles between SRI funds and conventional mutual funds can also explain why previous research has not been conclusive on whether SRI funds under- or outperform. Different investment styles generate excess returns during different market conditions and it is therefore logical that SRI funds sometimes underperform and sometimes outperform. Further, this makes even more sense when the assets held by SRI funds are no different from those held by conventional mutual funds in terms of generating value. Our findings are also in line with the predictions of Chevalier and Ellison (1997) and Brennan and Li (2008) where nonaligned interests of asset managers and investors affect portfolio composition and risk-adjusted returns of the funds. Our results are also in line with Bauer et al. (2002) that finds that ethical funds are more growth-oriented than conventional mutual funds.

Practitioners

We believe that our findings may be of interest to asset management companies, portfolio managers, investors and listed companies. As we have concluded, cash flows of SRI funds are less affected by historical performance and we find that SRI funds do not seek as much risks as conventional mutual funds to attract new capital. SRI funds might therefore be a good product to invest in for asset management companies and especially when the growing amount of asset under management of SRI funds is taken into consideration. Further, as we could not find any differences in valuation multiples between socially responsible and socially irresponsible companies with a negative screening, it might be a tool of differentiation by using a positive screening and thereby limiting the investment universe further. One alternative to internal negative screening is to use external screening to obtain economies of scale and thereby lowering the fees to investors while increasing the margins. Another alternative to differentiate itself from other asset managers is to invest heavily and further develop the negative screening processes.

Our findings might be disappointing to some investors in SRI funds since we do not find there to be any differences in valuation, or in risk-level, between socially responsible and socially irresponsible companies. However, our findings along with previous research indicate that the investors in SRI funds do not have to give up risk-adjusted returns to be able to invest ethically. Further, we did not find any differences in characteristics since the screening process do not make up the difference between SRI funds and conventional mutual funds. This means that investors are paying for a screening process that does not have any effects on the funds' compositions. If investors are eager to invest in socially responsible companies that are screened from a negative perspective, our results indicate it would be cheaper to invest in a corresponding index due to economies of scale. As a consequence, these findings might encourage asset managers to use positive screening instead. Further, as the portfolio managers of SRI funds' incentives are more aligned with the incentives of the investors in SRI funds in regards to risk-adjusted returns due to agency conflicts, we believe SRI funds to be good investments for investors who seek to invest in low risk funds. As stated before, portfolio managers of conventional mutual funds may seek more risk to attract new capital while cash flows of SRI funds do not share the same pattern. Lastly, we can conclude that SRI funds are good for investors who seek to invest in growth stocks rather than investing in conventional

mutual funds that claim to invest in growth stocks since the investors risk that the portfolio managers will invest in value-stocks to receive higher compensation.

For listed companies, the implications of our research are similar to those from previous research. We do not find there to be any incentives for companies to become socially responsible to obtain a higher valuation. This is somewhat troublesome to those companies that invest heavily to prove and show that they are socially responsible since they do not get the value for money back. As discussed before, companies signal to show that they are socially responsible but the signal is worthless if the market does not appreciate it. Further, we can see that socially responsible companies do not follow the recommendations of Morrison Paul and Siegel (2006) where the total proceeds from the CSR-program must be higher than the cost of the program. However, this does not mean that being socially responsible is something negative since we do not find the valuation or value-creation of socially responsible companies to be lower than to other companies. As discussed previously, our findings put together with the theories of Porter and Kramer (2006) and Hellsten and Mallin (2006) may push companies to revaluate their CSR strategies to turn them to being value-creating instead of not having any impact.

Further research

During our work with this paper, further questions in relation to our hypotheses have arisen. Since the interest for SRI continues to increase from investors and other stakeholders, we believe more research can be conducted regarding whether being socially responsible is value creating on firm level. A topic that can be further researched is the positive screening process where funds invest in the best performing socially responsible companies. Further research would be interesting since we believe it is easier to study demand effects on a dataset where the demand-affected stocks are fewer, e.g. by studying indices. In line with this, it would be interesting to research which screening criteria are value creating on a firm level in accordance with Porter and Kramer (2006) and Hellsten and Mallin (2006). Such studies can focus on how much of firms' value creation that can be derived from activities that are viewed to be socially responsible, e.g. if more philanthropy and more disclosure of emissions enhance firm value.

Another interesting research topic can be to further analyse the investment styles of SRI funds compared to conventional mutual funds. This can be accomplished by looking at investment time perspectives and investment styles during different market conditions, e.g. if SRI funds hold their investments longer and if SRI funds rebalance their portfolios to even less risky investments during bear markets. Further, it would be interesting to analyse how SRI funds rebalance their portfolios to different sectors during different market conditions since conventional mutual funds usually rebalance to less cyclical sectors such as the alcohol and tobacco sectors.

8 Summary

In this paper, we have analysed SRI and 1) if socially responsible stocks are valued differently from socially irresponsible stocks and 2) if SRI funds invest differently compared to conventional mutual funds. Our objective with the paper was to provide a different approach on SRI by combining the analysis of both valuation multiples and portfolio management. We believe that the results of this paper will be important to be able to understand previous research and for stakeholders such as investors and asset management companies.

The study shows that SRI funds are different from conventional mutual funds but also that socially responsible stocks are not valued differently in comparison to socially irresponsible stocks. Accordingly, the difference is explained by differences in portfolio management. Portfolio managers of SRI funds invest in stocks with higher valuation multiples than portfolio managers of conventional mutual funds.

Previous research has not been able to be conclusive on whether SRI funds under- or outperforms. The findings of that socially responsible stocks are not valued differently from socially irresponsible stocks support previous research. However, our research shows that the differences in fund performance can be explained by the differences in investment styles between SRI funds and conventional mutual funds where different investment styles outperform during different time periods.

SRI funds are punished with structurally lower risk-adjusted returns according to the CAPM since the SRI funds limit their investment universe and their capabilities to diversification. Investing in low-risk stocks can be a way for SRI funds to limit their risks. According to agency theory, there exist more agency conflicts within the conventional mutual fund structure than within the SRI fund structure. Portfolio managers of conventional mutual funds have more incentives to increase the funds' risks to generate high returns than portfolio managers of SRI funds since investors in conventional mutual funds are more responsive to fund performance.

Our paper shows that investors in SRI do not have to give up returns to be able to invest ethically. Further, investors that are more risk avert should invest in SRI funds since portfolio managers of conventional mutual funds might increase the funds' risks too much.

9 References

Alestig, P. (2013, February, 4). *Här topprankas Telias antikorruptionsarbete*, Svenska Dagbladet. Retrieved March 15, 2013 from http://www.svd.se/naringsliv/branscher/teknik-och-telekom/har-topprankas-telias-antikorruptionsarbete_7886322.svd

Aupperle, E. K., Carroll, B. A. & Hatfield, D. J. (1985). An Empirical Examination of the Relationship Between Corporate Social Responsibility and Profitability. *Academy of Management Journal*, 28 (2), pp.446-463

Bauer, R., Koedijk, K. & Otten, R. (2002). International Evidence on Ethical Mutual Fund Performance and Investment Style. *Journal of Banking & Finance 29, pp. 1751-1767*

Bauer, R., Otten, R. & Rad, T. A. (2006). Ethical Investing in Australia: Is there a financial penalty?. *Pacific-Basin Finance Journal*, 14, pp. 33-48

Basu, S. (1983). The Relationship Between Earnings' Yield, Market Value and Return for NYSE Common Stocks. *Journal of Financial Economics*, 12, pp. 129-156

Benson, L. K., Brailsford, J. T. & Humphrey, E. J. (2006). Do Socially Responsible Fund Managers Really Invest Differently?. *Journal of Business Ethics*, 65, pp.337-357

Berk, J. B. (1997). Does Size Really Matter?. *Financial Analysts Journal*, September/October 1997, pp. 12-18

Blandón G. J., & Bosch, A. M. J. (2009). Short-Term Effects of Analysts Recommendations in Spanish Blue Chips Returns and Trading Volumes. *Estudios de Economía*, 36 (1), pp. 33-46

Brennan, J. M., & Li, F. (2008). Agency and Asset Pricing. Retrieved May 5, 2013 from http://ssrn.com/abstract=1104546

Bollen, N. (2006). Mutual Fund attributes and Investor Behaviour. *Journal of Financial and Quantitative Analysis* 42, pp. 683-708

Cai, F. & Xu, L. (2007). Short and Long Term Impact of Stock Recommendations Published in Barron's. *Northeast Business & Economics Association*, October 2007, pp. 203-206

Capelle-Blancard, G. & Monjon, S. (2011). The Performance of Socially Responsible Funds, Does the Screening Process Matter?. *Centre D'Etudes Propectives Et D'Informations International*, No 2011 – 12

Carhart, M., (1997). On persistence in mutual fund performance. *Journal of Finance* 52, pp. 57–82.

Chevalier, J., & Ellison, G. (1997). Risk Taking by Mutual Funds as a Response to Incentives. *Journal of Political Economy,* 105 (6): 1167-1200

Cortez, C. M., Silva, F., & Areal, N. (2008). The Performance of European Socially Responsible Funds. *Journal of Business Ethics*, 87, pp. 573-588

Coval, J., & Stafford, E. (2007). Asset fire sales (and purchases) in equity markets. *Journal of Financial Economics*, 86, pp. 479-512

DataStream, Thomson Reuters (2013)

European Commission (2013). Sustainable and Responsible business.
Retrieved March 8, 2013
http://ec.europa.eu/enterprise/policies/sustainable-business/corporate-social-responsibility/index_en.htm

Eurosif. (2006). European SRI Study 2006. Brussels: Eurosif
Retrieved March 8, 2013 from
http://www.eurosif.org/images/stories/pdf/eurosif_sristudy_2006_complete.pdf

Eurosif. (2012). European SRI Study 2012. Brussels: Eurosif

Retrieved March 8, 2013 from
http://eurosif.org/images/stories/pdf/1/eurosif%20sri%20study_low-res%20v1.1.pdf

Fama, F. E., & French, R. K. (1992). The Cross-Section of Expected Stock Returns. *The Journal of Finance,* 47 (2), June 1992, pp. 427-465

Finansinspektionen (2013). Retrieved May 5, 2013 from
http://www.finansinspektionen.se/Register/Fondinnehav/

Fisher, A. P. (2003). *Common Stocks and Uncommon Profits*. New Jersey, John Wiley & Sons, Inc.

Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach* **(**not full reference, will be adjusted**)**

French, R. K. (2013). Historical Benchmark Returns. Retrieved April 23, 2013 from
http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

Friedman, M, (1970). The Social Responsibility of Business is to Increase its Profits. *The New York Times Magazine*, 1970-09-13

Geczy, C. C., Stambaugh, F. R., & Levin, D. (2005). Investing in Socially Responsible Mutual Funds. Retrieved May 10, 2013 from http://ssrn.com/abstract=416380

Gil-Bazo, J., Ruiz-Verdú, P., & Santos, A. P. A. (2010). The Performance of Socially Responsible Mutual Funds: The Role of Fees and Management Companies. *Journal of Business Ethics*, 94, pp. 243-263

Hamilton, S., Jo, H., & Statman, M., (1993). Doing Well While Doing Good? The Investment Performance of Socially Responsible Mutual Funds. *Financial Analysts Journal*, November-December, pp.62-66

Hellsten S., & Mallin C., (2006). Are 'Ethical' or 'Socially Responsible' Investments Socially Responsible?. *Journal of Business Ethics, 66: 393–406*

Huimin, L., Wai Kong, A. C., & Eduardo, R. (2010). Socially Responsible Investment in Good and Bad Times. *International Research Journal of Finance and Economics*, 54, pp.152-165

Ioannou, I., & Serafeim, G. (2010). The Impact of Corporate Social Responsibility on Investment Recommendations. Working paper. Retrieved May 10, 2013 from http://www.hbs.edu/faculty/Publication%20Files/11-017.pdf

Jensen, C. M. (1968). Problems in Selection of Security Portfolios. *The Journal of Finance*, 23 (2), pp. 389-416

Jensen, C. M. (2002). Value Maximization, Stakeholder Theory, and the Corporate Objective Function. *Business Ethics Quarterly*, 12 (2), pp.235-256

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

Jones, M. T. (1995). Instrumental Stakeholder Theory: A Synthesis of Ethics and Economics. *Academy of Management Review*, 20 (2), pp. 404-437

Kempf, A., & Osthoff, P. (2007). The Effect of Socially Responsible Investing on Portfolio Performance. *European Financial Management*, 13 (5), pp. 908-922

Koller, T., Goedhart, M., & Wessles, D. (2010). *Valuation, Measuring and Managing the Value of Companies*. 5th edition. the U.S: John Wiley & Sons, Inc.

Lam, S. S., Jacob, G. H., & Toh, A. S. Y. (2012). Socially responsible investment styles: Equity risk, return and valuation. Paper presented at the PRI-CBERN Academic Network Conference 2012, Toronto.

Leland, E. H., & Pyle, H. D., (1997). Informational Asymmetries, Financial Structure, and Financial Intermediation. *The Journal of Finance*, 32 (2), pp. 371-387

Lindroth, J. (2002, October, 30). Börsbubblans största vinnare, *Affärsvärlden.* Retrieved May 5, 2013 from http://www.affarsvarlden.se/hem/nyheter/article2538053.ece

Loughran, T., & Wellman, W. (2011). New Evidence on the Relation between the Enterprise Multiple and Average Stock Return. *Journal of Financial and Quantitative Analysis*, 46 (6), pp.1629-1650

Luther, G. R., & Matako, J. (1994). The Performance of Ethical Unit Trusts: Choosing an Appropriate Benchmark. *British Accounting Review*, 26, pp. 77-89

Lynch, P., & Rothchild, J. (2000). *One Up on Wall Street*. New York, *Simon & Schuster Paperbacks*

Managi, S., Okimoto, T., & Matsuda, A. (2012). Do Socially Responsible Investment Indexes Outperform Conventional Indexes?. *Munich Personal RePEc Archive*

Mill, A. G. (2006). The Financial Performance of a Socially Responsible Investment Over Time and a Possible Link with Corporate Social Responsibility. *Journal of Business Ethics*, 63, pp.131-148

Morningstar (2013). Retrieved May 5, 2013 from http://www.morningstar.se/Help/Morningstar/Dictionary.aspx

Morrison Paul, Catherine J., & Siegel, D. S., (2006). Corporate Social Responsibility and Economic Performance. Retrieved May 10, 2013 from http://ssrn.com/abstract=900838

Norwegian Government (2013). Retrieved March 15, 2013 from http://www.regjeringen.no/en/sub/Styrer-rad-utvalg/ethics_council.html?id=434879

Porter, E. M., & Kramer, R. K., (2006). Strategy & Society. *Harvard Business Review*, December 2006, pp. 78-92

Porter, E. M., & Kramer, R. K., (2011). Creating Shared Value. *Harvard Business Review*, January-February 2011, pp. 62-77

Renneboog L., Horst J., & Zhang C. (2008). Socially responsible investments: Institutional aspects, performance, and investor behaviour. *Journal of Banking & Finance*, 32, pp. 1723-1742

Renneboog L., Horst J., & Zhang C. (2010). Is ethical money financially smart?. *J. Finan. Intermediation*

Rhodes M. (2009). Information Asymmetry and Socially Responsible investments. *Journal of Business Ethics (2010) 95:145–150*

Shank, T., Manullang, D., & Hill, R. (2005). "Doing Well While Doing Good" Revisited: A Study of Socially Responsible Firms' Short-Term versus Long-term Performance. *Managerial Finance*, 30 (8), pp.33-46

Sharp, W.F. (1964). Capital asset prices: a theory of market equilibrium under conditions of risk. *Journal of Finance*, 19 (3), pp. 425-442

Shleifer, A. (1986). Do Demand Curves for Stocks Slope Down?. *The Journal of Finance*, Vol. XLI (3), pp.579-590

Sjunde AP-fonden (2001). *Sjunde AP-fonden 2001*. Retrieved May 5, 2013 from http://www.ap7.se/PageFiles/92/2001/ap7_arsredovisning2001.pdf

Smith, A. (1776). An Inquiry into the Nature and Causes of the Wealth of Nations. Retrieved March 15, 2013 from http://www.econlib.org/library/Smith/smWN1.html

Starr M. (2007). Socially Responsible Investment and Pro-social Change. *Working paper American University*

Statman, M. (1987). How Many Stocks Make a Diversified Portfolio?. *Journal of Financial and Quantitative Analysis*, 22 (3), pp. 353-363

Statman, M. (2000). Socially Responsible Mutual Funds. *Association for Investment Management and Research*, May/June, pp.30-39

Statman, M. (2007). Socially Responsible Investments

Stenström, H. C., & Thorell, J. J. (2007). *Evaluating the Performance of Socially Responsible Investment Funds: A Holding Data Analysis*. MSc, Stockholm School of Economics

UNPRI (2013). Retrieved March 14, 2013 from http://www.unpri.org

10 Appendix

Appendix 1 – Companies that are viewed as socially irresponsible by AP 7 and NOF

Company	Screen		Company	Screen	
Aes Corporation	AP7		L-3 Communications	AP7	
Africa Israel Investments Ltd and Danya Cebus Ltd	NOF		Larsen & Toubro	AP7	
Alliance One International Inc.	NOF		Lingui Development Berhad Ltd	NOF	
Alliant Techsystems Inc	NOF		Lockheed Martin Corp	NOF	AP7
Alstom	AP7		Lorillard Inc	NOF	
Altria Group Inc.	NOF		Lukoil	AP7	
Babock International Group	AP7		Madras Aluminium Company	NOF	
BAE Systems	AP7		Nissan Motor	AP7	
Barrick Gold Corp	NOF		Norilsk Nickel	NOF	
Boeing	NOF	AP7	Northrop Grumman Corp.	NOF	AP7
British American Tobacco BHD	NOF		Philip Morris Cr AS	NOF	
British American Tobacco Plc	NOF		Philip Morris International Inc	NOF	
Cemex	AP7		Poongsan Corporation	NOF	
Cintas Corp	AP7		Potash Corporation of Saskatchewan	NOF	AP7
CNOOC	AP7		Raytheon Co.	NOF	AP7
Daeqoo International	AP7		Reynolds American Inc	NOF	
Daimler AG	AP7		Rio Tinto Ltd	NOF	
Deutsche Telecom	AP7		Rio Tinto Plc	NOF	
Dongfeng Motor Group Co Ltd.	NOF	AP7	Rolls-Royce Group	AP7	
Doosan	AP7		Royal Dutch Schell	AP7	
Duke Energy Corp	AP7		Safran SA.	NOF	AP7
EADS	NOF	AP7	Saic	AP7	
EADS Finance BV	NOF		Serco Group Plc.	NOF	AP7
Ecopetrol	AP7		Shanghai Industrial Holdings Ltd.	NOF	
Elbit	NOF	AP7	Shikun & Binui Ltd	NOF	
Eutelsat Communications	AP7		Singapore Technologies	AP7	
Finmeccanica	AP7		Souza Cruz SA	NOF	
Freeport McMoRan Copper & Gold Inc	NOF		Sterlite Industries Ltd	NOF	AP7
Gen Corp. Inc.	NOF		Swedish Match AB	NOF	
General Dynamics corporation	NOF	AP7	Tesco	AP7	
Grupo Carso SAB de CV	NOF		Textron Inc.	NOF	AP7
Gudang Garam tbk pt	NOF		Thales	AP7	
Hankook Tire MFG CO	AP7		The Babcock & Wilcox Co.	NOF	
Hanwha Corp	NOF	AP7	Universal Corp VA	NOF	
Honeywell International Corp.	NOF		URS Corporation	AP7	
Imperial Tobacco Group Plc	NOF		Vector Group Ltd.	NOF	
Incitec Pivot	AP7		Vedanta Resources Plc	NOF	AP7
ITC Ltd	NOF		Wal-Mart de Maexico SA de CV	NOF	
Jacobs Engineering Group Inc.	NOF	AP7	Wal-Mart Stores Inc.	NOF	AP7
Japan Tobacco Inc	NOF		Wesfarmers	AP7	
KT&G Corp	NOF		Wesfarmers	AP7	

Appendix 2 – The aggregated fund types' valuation multiple means

	Conventional Mutual Funds			Replicating Mutual Funds			SRI Funds		
	P/E	P/B	EV /EBITDA	P/E	P/B	EV /EBITDA	P/E	P/B	EV /EBITDA
2008-01-31	15,17	3,07	10,74	15,19	3,02	10,82	17,68	3,23	11,25
2008-02-29	15,22	3,00	10,71	15,24	2,93	10,79	17,47	3,13	11,25
2008-03-31	15,13	2,97	10,14	15,01	2,87	10,29	16,76	3,05	10,92
2008-04-30	15,17	3,25	10,14	14,93	3,15	10,21	16,83	3,32	10,94
2008-05-30	15,25	3,31	10,15	15,15	3,20	10,22	16,76	3,40	10,90
2008-06-30	13,93	3,07	10,00	14,04	3,00	10,11	15,81	3,26	10,07
2008-07-31	13,62	2,90	9,77	13,55	2,81	9,86	15,55	3,12	9,98
2008-08-29	14,01	2,93	9,75	13,81	2,82	9,83	15,92	3,14	9,97
2008-09-30	12,58	2,64	9,41	12,65	2,59	9,57	14,85	2,95	9,86
2008-10-31	10,50	2,24	9,36	10,56	2,20	9,43	13,03	2,66	9,75
2008-11-28	10,08	2,12	9,29	10,15	2,08	9,39	12,09	2,46	9,66
2008-12-31	10,38	2,17	10,93	10,30	2,05	9,71	11,62	2,32	9,82
2009-01-30	11,27	2,37	9,61	11,22	2,34	9,75	11,42	2,36	9,44
2009-02-27	10,64	2,20	9,60	10,57	2,15	9,77	10,67	2,17	9,49
2009-03-31	11,38	2,28	9,55	11,35	2,22	9,70	11,03	2,12	9,72
2009-04-30	13,05	2,42	9,59	13,08	2,37	9,72	13,64	2,38	9,80
2009-05-29	14,07	2,51	9,64	14,20	2,45	9,75	14,62	2,46	9,87
2009-06-30	14,35	2,54	10,44	14,49	2,48	10,57	15,08	2,51	10,06
2009-07-31	16,14	2,67	10,80	16,29	2,61	10,95	15,09	2,66	10,49
2009-08-31	16,98	2,77	10,84	17,20	2,71	10,98	16,47	2,76	10,52
2009-09-30	17,37	2,84	11,10	17,61	2,78	11,24	16,94	2,80	11,22
2009-10-30	17,26	2,83	11,26	17,42	2,78	11,39	17,46	2,82	11,53
2009-11-30	18,35	2,87	11,30	18,95	2,81	11,42	18,45	2,89	11,56
2009-12-31	19,28	2,97	10,93	19,93	2,91	11,06	19,33	2,98	12,42
2010-01-31	18,26	2,42	11,88	18,23	2,41	12,28	18,87	2,77	12,36
2010-02-28	18,80	2,49	11,96	18,86	2,40	12,27	19,73	2,78	12,33
2010-03-31	19,94	2,58	11,90	20,22	2,51	12,13	21,11	2,91	12,22
2010-04-30	18,92	2,56	11,90	19,82	2,51	12,10	20,50	2,79	12,41
2010-05-31	18,97	2,47	11,77	19,02	2,39	12,00	18,55	2,66	12,38
2010-06-30	18,23	2,41	10,95	17,88	2,29	11,09	18,19	2,57	11,68
2010-07-30	17,82	2,43	10,86	17,91	2,34	10,85	17,63	2,54	11,51
2010-08-31	16,02	2,33	10,58	16,26	2,29	10,78	17,00	2,52	11,44
2010-09-30	17,08	2,46	11,27	16,90	2,37	11,53	17,13	2,60	11,66
2010-10-29	16,69	2,53	11,27	16,94	2,48	11,66	17,37	2,63	11,55
2010-11-30	16,31	2,51	11,39	16,40	2,46	11,67	16,89	2,62	11,55
2010-12-31	16,96	2,63	10,83	17,03	2,54	11,25	17,60	2,71	11,10
2011-01-31	16,92	2,58	10,61	17,58	2,51	10,96	17,68	2,79	10,91
2011-02-28	17,01	2,60	10,57	16,89	2,55	10,98	17,49	2,79	10,77
2011-03-31	16,78	2,57	10,72	16,81	2,53	10,92	17,31	2,82	10,69
2011-04-29	16,87	2,65	10,72	16,98	2,61	10,88	17,07	2,89	10,63
2011-05-31	16,47	2,62	10,75	16,70	2,60	10,89	16,90	2,90	10,66
2011-06-30	16,48	2,60	10,40	16,52	2,56	10,52	16,59	2,91	10,53
2011-07-29	16,25	2,60	10,45	16,18	2,54	10,30	16,71	2,92	10,76
2011-08-31	14,53	2,47	10,38	14,26	2,39	10,27	15,98	2,79	10,72
2011-09-30	13,99	2,37	9,83	13,31	2,26	9,92	15,21	2,68	10,36
2011-10-31	14,61	2,47	9,75	14,14	2,34	9,69	15,00	2,77	10,05
2011-11-30	13,84	2,45	9,75	14,02	2,41	9,69	14,81	2,80	9,99
2011-12-30	13,52	2,42	9,42	13,94	2,43	9,48	14,88	2,80	9,52
2012-01-31	14,02	2,57	9,19	14,88	2,57	9,24	15,21	2,93	9,75
2012-02-29	14,66	2,66	9,18	15,36	2,66	9,28	15,61	3,04	9,81
2012-03-30	15,10	2,69	9,22	15,94	2,73	9,54	15,85	3,09	10,10
2012-04-30	15,12	2,72	9,53	15,49	2,75	9,75	15,73	3,08	10,25
2012-05-31	14,77	2,70	9,50	14,69	2,68	9,75	15,18	2,97	10,24
2012-06-29	15,41	2,81	9,44	14,62	2,71	9,67	14,96	2,97	10,12
2012-07-31	15,73	2,89	9,57	15,13	2,78	9,67	16,44	3,09	10,01
2012-08-31	15,66	2,91	9,59	15,58	2,85	9,61	16,68	3,12	10,02
2012-09-28	15,26	2,85	9,92	15,74	2,88	9,94	16,90	3,15	10,17
2012-10-31	15,70	2,84	9,78	16,07	2,85	9,97	16,72	3,18	10,14
2012-11-30	15,60	2,92	9,78	16,05	2,91	9,99	16,33	3,25	10,13
2012-12-31	15,75	2,95	10,29	16,28	2,95	10,36	16,44	3,28	10,32

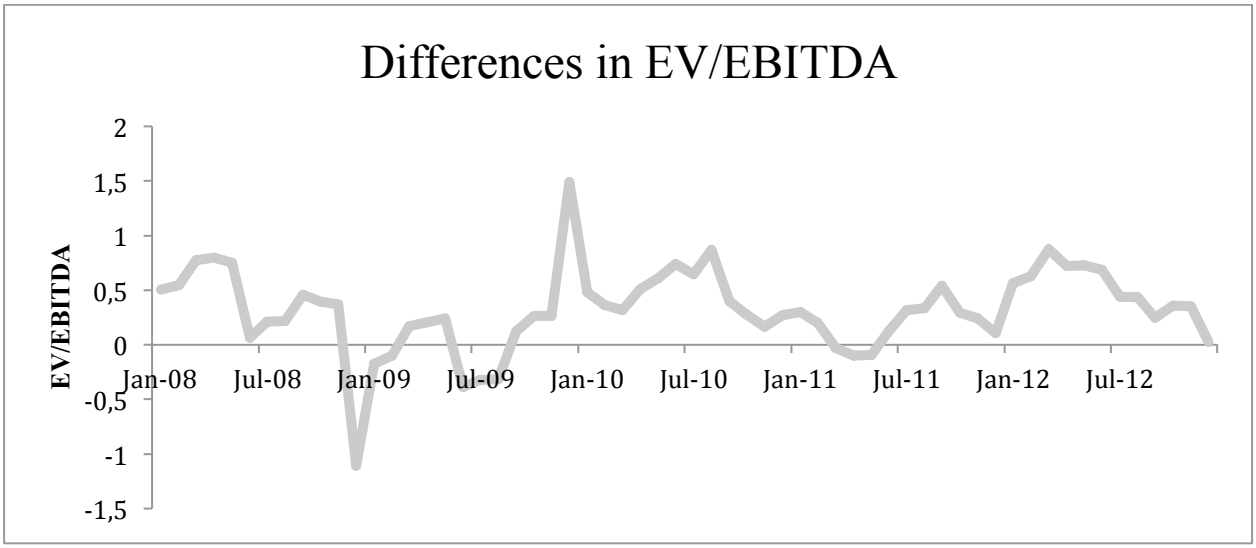
Appendix 3 – Each fund's valuation multiple means

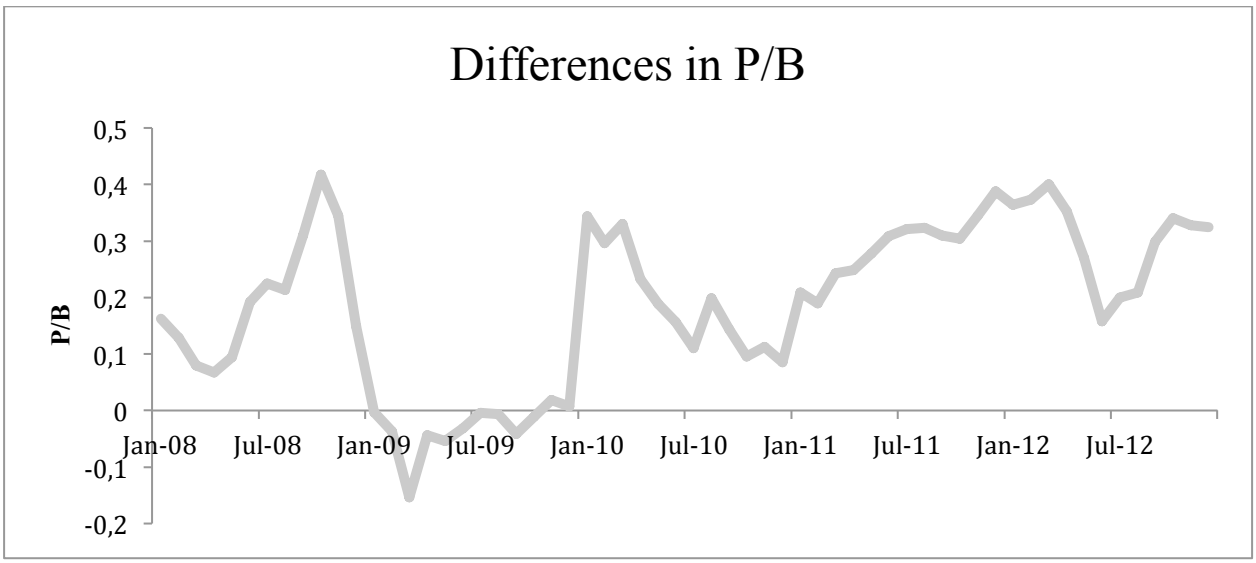
Conventional mutual funds	Mean values			Max values			Min values			Standard deviation		
	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA
SEB Globalfond	16,04	3,05	9,95	21,27	4,91	11,86	10,24	1,89	8,81	16,8%	21,3%	8,2%
SEB Europafond	13,84	2,45	10,77	18,28	3,01	12,72	8,16	1,49	8,66	16,6%	10,7%	13,4%
Danske Invest Utland	17,20	2,37	10,26	22,87	3,97	11,92	10,33	1,67	8,15	17,7%	26,7%	10,8%
Nordea Europafond	14,46	2,53	10,69	25,81	3,69	13,46	8,31	1,47	8,16	27,5%	25,0%	13,5%
Länsförsäkringar Globalfond	16,64	2,36	11,19	24,57	3,34	13,96	10,94	1,89	9,18	20,0%	15,0%	10,6%
Catella Europafond	13,48	2,28	10,48	17,68	3,07	13,16	8,39	1,12	7,61	14,3%	20,2%	15,3%
Handelsbanken Europafond	14,10	3,10	10,77	19,63	4,23	30,94	8,18	2,00	8,70	17,9%	21,2%	25,9%
Handelsbanken Globalfond	16,86	2,55	9,60	24,84	4,12	13,45	11,28	1,57	7,89	18,1%	27,7%	16,8%
Länsförsäkringar Europafond	13,25	3,37	9,28	19,47	4,35	11,72	9,20	2,44	6,78	16,6%	13,2%	14,9%
SEB Nordamerikafond	16,30	2,50	11,15	19,96	3,27	13,35	10,24	2,05	8,92	14,3%	10,4%	10,8%
Swedbank Robur Europafond	14,62	1,84	10,35	19,30	2,76	12,92	9,18	1,49	8,48	17,1%	18,1%	11,2%
AMF Aktiefond Europa	13,92	2,88	9,56	21,08	3,45	11,37	9,01	2,01	8,30	19,9%	11,2%	8,8%
Swedbank Robur Globalfond	18,26	2,95	9,77	29,04	5,21	10,90	8,60	1,64	8,37	23,7%	32,2%	6,9%
AMF Aktiefond Global	17,18	2,74	11,20	22,78	3,88	14,32	10,50	1,97	9,05	17,0%	15,4%	12,3%
Swedbank Robur Globalfond MEGA	15,15	2,70	9,96	18,75	3,17	11,35	9,44	1,96	8,71	14,6%	9,1%	7,9%
Average	15,42	2,64	10,33	21,69	3,76	13,83	9,47	1,78	8,39	18,1%	18,5%	12,5%

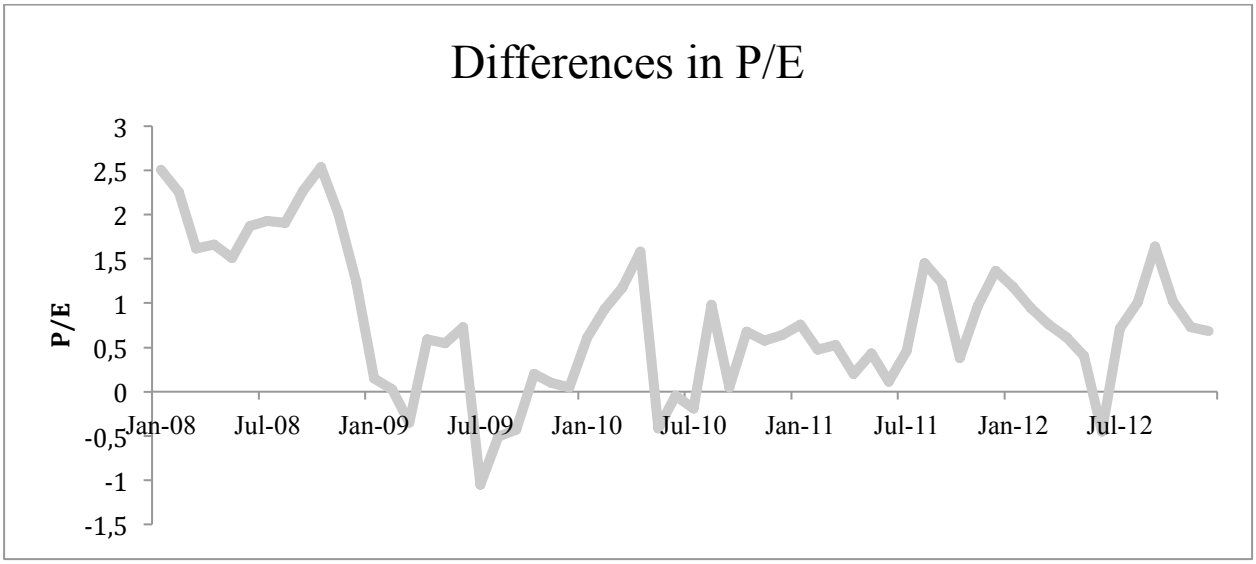
Replicating portfolios	Mean values			Max values			Min values			Standard deviation		
	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA
Catella Europafond	13,84	2,38	11,42	22,47	3,35	14,54	8,35	1,80	9,57	18,3%	16,3%	10,4%
Handelsbanken Europafond	14,32	2,27	10,86	20,13	3,05	13,66	8,14	1,07	7,91	18,4%	20,8%	15,8%
Handelsbanken Globalfond	17,05	3,06	10,61	26,05	4,09	12,12	11,07	1,98	8,86	19,3%	20,6%	8,4%
Länsförsäkringar Europafond	13,28	2,50	9,79	19,14	4,08	13,64	8,78	1,57	8,06	17,5%	27,6%	17,1%
Swedbank Robur Europafond	14,70	2,47	11,40	19,83	3,27	13,94	8,95	1,93	9,19	18,4%	13,7%	11,3%
AMF Aktiefond Europa	13,51	1,84	10,70	20,66	2,72	13,53	9,01	1,49	8,50	21,4%	17,5%	13,9%
SEB Nordamerikafond	16,50	3,01	9,37	20,63	3,78	12,13	10,33	2,21	6,71	14,8%	12,9%	16,5%
SEB Europafond	14,14	2,39	10,85	18,71	3,19	13,13	8,12	1,72	8,79	16,5%	10,6%	13,2%
Nordea Europafond	14,77	2,47	10,42	26,80	4,28	12,08	8,28	1,66	8,65	27,7%	30,0%	10,1%
Länsförsäkringar Globalfond	16,57	2,45	10,65	23,95	3,63	13,56	10,94	1,42	8,19	20,5%	25,5%	14,2%
SEB Globalfond	16,09	2,88	10,04	22,33	4,95	11,95	10,21	1,84	9,06	17,1%	24,4%	8,0%
Swedbank Robur Globalfond	18,51	2,80	9,65	29,68	3,53	11,49	8,54	1,95	8,45	24,5%	13,6%	8,4%
AMF Aktiefond Global	17,19	2,73	11,29	22,83	3,75	14,38	10,50	1,97	9,08	17,4%	14,3%	12,7%
Swedbank Robur Globalfond MEGA	15,21	2,64	10,04	19,01	3,10	11,45	9,38	1,92	8,77	15,2%	9,8%	7,7%
Danske Invest Utland	17,20	2,95	9,77	22,87	5,21	10,90	10,33	1,64	8,37	17,7%	32,2%	6,9%
Average	15,53	2,59	10,46	22,34	3,73	12,83	9,40	1,74	8,54	19,0%	19,3%	11,7%

SRI funds	Mean values			Max values			Min values			Standard deviation		
	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA	P/E	P/B	EV/ EBITDA
Aktie-Ansvar Europa	16,08	2,89	11,76	24,45	4,29	17,42	7,89	2,29	7,85	22,0%	16,4%	19,5%
Nordea Etisk Urval Global	14,51	2,76	9,81	23,13	4,14	12,18	9,28	1,70	7,89	19,4%	19,8%	12,0%
DNB Utlandsfond	16,26	2,35	10,11	23,40	3,27	12,23	10,34	1,71	8,39	19,3%	15,6%	9,6%
SPP Aktiefond Global Sustainability	15,70	2,54	9,62	27,39	3,50	12,29	9,16	1,93	7,82	25,2%	15,0%	9,6%
KPA Etisk Aktiefond	17,60	2,97	12,25	21,38	3,72	14,82	11,03	2,25	10,00	14,6%	11,1%	9,4%
Banco Etisk Europa	15,34	2,49	10,69	23,62	3,30	14,03	8,49	1,65	6,44	20,4%	16,2%	20,5%
Swedbank Robur Ethica SverigeGlobal	17,02	2,89	11,03	30,92	3,56	15,90	11,40	1,93	8,68	23,2%	14,4%	11,9%
Danske Invest SRI Global	16,40	2,75	10,99	20,03	3,30	13,07	10,78	1,97	9,23	12,6%	11,2%	8,4%
Öhman Etisk Index Europa	14,78	2,75	10,93	20,14	3,40	13,06	9,06	1,94	9,01	15,9%	13,4%	8,6%
Öhman Etisk Index USA	19,38	3,64	11,18	23,58	5,88	12,48	11,34	1,95	9,47	14,3%	29,0%	6,4%
Swedbank Robur Ethica Global Mega	15,65	2,98	9,83	20,37	3,71	12,20	11,08	2,19	8,59	12,7%	11,3%	8,3%
Folksam Globala Aktiefond	15,14	2,98	9,39	20,79	4,23	12,34	11,40	2,46	4,60	14,5%	14,3%	25,2%
SEB Etisk Globalfond	16,93	2,86	10,93	22,76	3,50	14,63	9,91	2,00	9,34	16,5%	14,4%	11,3%
Average	16,21	2,83	10,66	23,23	3,83	13,59	10,09	2,00	8,26	17,7%	15,6%	12,4%

Appendix 4 – Differences in valuation multiples between SRI funds and conventional mutual funds over time (SRI funds – conventional mutual funds)







Appendix 5 – Article based on the paper

Etiska fonder väljer lågriskaktier

Förvaltare av etiska fonder investerar i större utsträckning i lågriskaktier än vad förvaltare av vanliga fonder gör, hävdar två studenter vid Lunds Universitet.

Anledningen kan vara att förvaltare av vanliga fonder har fler incitament för att öka den finansiella avkastningen samt risken för fonden.

De senaste åren har antalet etiska fonder ökat samtidigt som privatpersoner och institutioner investerar allt mer kapital i etiska fonder. Men kan privatpersoner och investerare förvänta sig några skillnader i avkastning och värdering mellan etiska aktier och vanliga aktier?

”Nej, vi finner att det inte finns några skillnader i värdering och tidigare studier påvisar att det inte finns några skillnader i finansiell avkastning”, säger Filip Andersson och Oskar Andersson.

I deras studie analyserar de dels om det finns några skillnader i värderingsmultiplar mellan etiska aktier och vanliga aktier och dels om det finns skillnader i investeringsstrategier mellan etiska aktiefonder och vanliga aktiefonder.

Att det inte finns några skillnader i värderingsmultiplar eller finansiell avkastning mellan etiska aktier och vanliga aktier är en intressant slutsats då privatpersoner och institutioner inte behöver ge upp finansiell avkastning för att kunna investera etiskt.

Skillnader i investeringsstrategier

Förutom slutsatsen att det inte finns några skillnader i värdering mellan etiska aktier och vanliga aktier, finner Filip Andersson och Oskar Andersson i deras uppsats att etiska fonder investerar i aktier med högre värderingsmultiplar än vanliga fonder.

Eftersom det inte finns några skillnader i värderingsmultiplar mellan etiska aktier och vanliga aktier, beror skillnaden på valet av olika investeringsstrategier.

Fakta

- Etiska fonder är fonder som förbjudna att investera i oetiska företag, ex. tobaksföretag.
- Idag har finns det mer än 378 miljarder euro. investerat i svenska etiska fonder.

STUDENTERNA. Filip Andersson t.v. och Oskar Andersson t.h.

”Förvaltare av etiska fonder investerar hellre i tillväxtaktier, dvs. aktier med höga värderingsmultiplar, i jämförelse med förvaltare av vanliga fonder”, säger Filip Andersson. Deras strategier skiljer sig helt enkelt åt och kan inte förklaras på något annat sätt eftersom etiska och vanliga aktier värderas liknande, lägger han till.

Incitament påverkar strategier

I deras uppsats diskuterar de två studenterna potentiella förklaringar till varför etiska fonder och vanliga fonder investerar olika.

”Tidigare studier visar att investerarna i etiska fonder inte fokuserar på finansiell avkastning i lika stor utsträckning som investerare i vanliga fonder”, säger Oskar.

I vanliga fonder är fondförvaltarnas ersättning därför i större utsträckning korrelerad med historisk avkastning eftersom fondförvaltarna ofta får betalt beroende på hur mycket kapital de förvaltar, fortsätter han.

Fondförvaltarna tjänar följaktligen mer om de kan attrahera mer kapital, vilket de gör om den finansiella avkastningen i fonden ökar. För etiska fonder ser kapitalflödena inte likadana ut och därför tjänar fondförvaltarna inte lika mycket på att öka risken och därmed förhoppningsvis den finansiella avkastningen för fonden.

Som privatinvesterare bör man därför vara mer orolig för att fondförvaltare av vanliga fonder tar för stora risker jämfört med fondförvaltarna av etiska fonder.

Karl Lagerblad