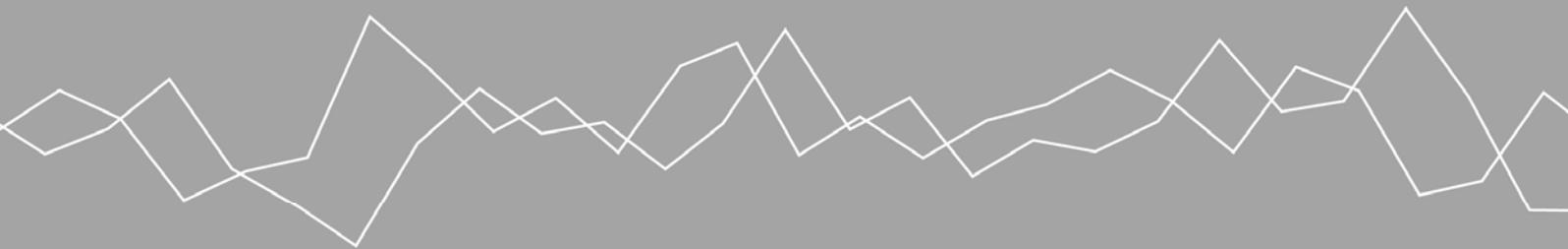


Sustainable Investment



seo economisch onderzoek

Amsterdam, 31 August 2010
Commissioned by Duisenberg School of Finance and Holland Financial Centre



Sustainable Investment

Literature Overview

Jarst Weda
Marco Kerste
Nicole Rosenboom

A decorative horizontal line art graphic consisting of several overlapping, jagged lines in a light grey color, spanning the width of the page.

seo economisch onderzoek

SEO Economic Research carries out independent applied economic research on behalf of the government and the private sector. The research of SEO contributes importantly to the decision-making processes of its clients. SEO Economic Research is connected with the Universiteit van Amsterdam, which provides the organization with invaluable insight into the newest scientific methods. Operating on a not-for-profit basis, SEO continually invests in the intellectual capital of its staff by encouraging active career planning, publication of scientific work, and participation in scientific networks and in international conferences.

SEO-report nr. 2010-67

ISBN 978-90-6733-585-0

Copyright © 2009 SEO Economic Research, Amsterdam. All rights reserved. Permission is hereby granted for third parties to use the information from this report in articles and other publications, with the provision that the source is clearly and fully reported.

Preface

At Duisenberg school of finance, we are committed to providing excellent financial education in order to create the next generation of responsible financial leaders. To achieve this, leading industry practitioners and world-class academics have joined to develop a set of forward-looking financial programmes. These programmes integrate theory and practice, and encourage critical thinking and continuous reflection on the dynamic financial landscape.

The existing set of programmes at Duisenberg school of finance will soon be expanded. With the support of Holland Financial Centre, specifically the Centre for Climate & Sustainability, Duisenberg School is currently developing a Programme on Finance & Sustainability. As part of the Programme, Duisenberg School and Holland Financial Centre intend to offer top-notch education and conduct cutting edge research in the area of finance & sustainability.

While industry practitioners and policymakers around the world are facing the topic of finance & sustainability on a daily basis, academic interest in the topic is relatively recent. In designing a curriculum and a research agenda, therefore, we feel it is important to take into account not only the insights yielded by academic research but also by industry practitioners and policymakers. Accordingly, as a preliminary step, we have asked SEO Economic Research to conduct a broad, high-level literature overview on finance & sustainability.

The survey has resulted in four reports, each providing a literature overview on one aspect of finance & sustainability: (i) financing the transition to sustainable energy; (ii) carbon trading; (iii) innovations in financing environmental and social sustainability; and (iv) sustainable investment. The report you have before you describes the review on ‘sustainable investment’.

The survey has been conducted by SEO Economic Research; Duisenberg School has offered suggestions throughout the process. The result should be of use not only to Duisenberg in designing its curriculum and research agenda, but also, we hope, to anyone interested in the increasingly relevant subject of finance & sustainability.

Amsterdam, August 19, 2010

Prof. Noreena Hertz
Chair of Globalisation, Sustainability and Finance

Prof. Dirk Schoemaker
Dean, Duisenberg school of finance

Sjoerd van Keulen
Chairman Holland Financial Centre

Table of Contents

Executive Summary and Further Research	i
1 Introduction.....	1
2 Corporate Social Responsibility	3
2.1 Introduction.....	3
2.2 Value Drivers and Measurement	4
2.3 The Business Case for CSR.....	5
2.3.1 The Value of Sustainable Companies.....	5
2.3.2 Implications for Investment and Investors.....	8
2.4 Reporting Requirements	8
2.5 Conclusion.....	9
3 Socially Responsible Investment.....	11
3.1 Introduction.....	11
3.2 Reasons for SRI	11
3.2.1 Financial Attractiveness.....	11
3.2.2 Compliance	12
3.2.3 Salient Information.....	14
3.3 Performance of Sustainable Funds.....	15
3.3.1 Underlying Theory.....	15
3.3.2 Mutual Fund Studies	16
3.3.3 Regional Differences.....	19
3.3.4 Short Run Versus Medium and Long Run Results.....	20
3.3.5 Multifactor Models.....	20
3.4 SRI Success Drivers.....	21
3.5 Conclusion.....	23
References.....	25

Appendix A	Tables and Figures.....	33
Appendix A.1	Socially Responsible Investment.....	33
Appendix A.2	Sustainability Reporting.....	35

Executive Summary and Further Research

Sustainability: Profitable from a Company Perspective...

Corporate Social Responsibility (CSR), or sustainability at the company level, entails incorporating ecological (environmental stakeholders) and social aspects (stakeholders other than shareholders and environmental stakeholders) when doing business.

Ethical considerations set aside, there is a financial business case for CSR as well. This review summarizes the economic ‘value drivers’ of CSR, as well as the empirical findings on the relationship between CSR and corporate performance. The former include operational efficiency opportunities, increased brand value and reputation, better risk management, attracting and retaining talented employees, and pre-empting regulatory intervention.

The financial bottom line of CSR has been analyzed empirically from many research angles, which makes the comparability of these studies challenging. Nevertheless, the outcome of the literature overview performed in this report is that empirical studies generally indicate that CSR enhances corporate financial performance. This holds true for all aspects of CSR that have been subjected to econometric analysis, which can be categorized in (i) good corporate governance; (ii) environmental performance; and (iii) stakeholder relations. In conclusion, the literature that has been discussed indicates there is consensus that corporate financial performance benefits from CSR.

...and at least as Profitable as Conventional Funds from an Investor Perspective

Socially Responsible Investment (SRI) concerns sustainability at the investment, fund or portfolio level and involves screening the sustainability of companies before investing in them. Investors applying SRI ‘target’ sustainable companies.

The economic rationale for SRI has been subject of many empirical studies. For data availability reasons, empirical research generally focuses on the performance of SRI funds vis-à-vis conventional funds: do SRI funds perform better or worse than conventional funds in terms of returns? Mutual fund studies that were reviewed in this report do not offer an unequivocal answer. In general, these studies conclude that SRI funds do not perform better or worse than conventional funds as most research offers statistically insignificant results. Several authors have attempted to take into account the regional and fund lifecycle differences that exist in fund performance. However, these studies offer mixed results as well.

The lack of statistically significant differences in most mutual fund studies supports the hypothesis that investing in SRI funds enhances sustainability without necessarily negatively affecting the return on investments. This conclusion is strengthened when focusing on mutual fund studies that are based on multifactor models. These studies use more sophisticated econometric models to incorporate non-quantifiable aspects and indicate that portfolios selected based on ‘environmental, social and governance’-related variables even outperform portfolios that score low on these variables.

In conclusion, although they do not provide unambiguous evidence of outperformance, empirical results *do* indicate that sustainable investments at least perform as well as conventional investments. More research is needed in this field.

Room for Further Research

This report will be used by Duisenberg school of finance which is currently designing a research agenda for its Programme on Finance & Sustainability. Box 1 hopes to contribute to the efforts of Duisenberg school of finance in this area, by summarizing blind spots in the research areas encountered during the course of writing this report. Some subjects have not been discussed in (academic) literature but are found to merit further research or updating.

Box 1 Subjects for future research

Included in this box are areas for further research that were encountered when composing this literature overview. Within each area potential research questions have been defined. The list of research areas and questions is by no means comprehensive, but should offer an interesting starting point to define further research.

- Measuring the value created by CSR
 - Can sustainable activities be standardized so as to better understand the relationship between sustainability on the one hand, and company performance and company value on the other?
 - It may be that 'measuring' the sustainability impact is not possible; what does this imply for narrative reporting?
 - The CSR-company performance relationship has been analyzed primarily by comparing market prices (e.g., stock prices and stock returns): what is the (isolated) impact of CSR on other corporate finance ratios (e.g., return on assets)?
- Pricing of CSR on capital markets
 - How can the direction of causality between CSR and higher shareholder value be determined?
 - How does CSR influence the cost of capital of firms and their investment decisions?
 - Are non-sustainable firms punished by the capital markets? Do investors require an additional return for investing in these companies? How does this influence the cost of capital of these firms as well as the investment and lending decisions of financial institutions?
 - How should CSR be better communicated so as to reveal more information about company risk and strategic intent?
- Assessing SRI success drivers
 - What is the precise impact of investment screens on SRI fund performance?
 - Can previous findings that fund performance benefits more from positive than negative portfolio screening, be generalized across sectors and countries?
 - What other success drivers can be established empirically?
- Robust empirical findings across existing studies
 - Current fractured evidence on (in particular) the relationship between sustainability and fund performance could benefit from techniques as meta-analysis and Influential Literature Analysis (ILA).¹
- Impact of SRI on financial institutions
 - What is the impact of SRI on the investment and lending decisions of financial institutions?
 - How can 'outsiders' evaluate the impact of the adoption of sustainability principles on the performance of banks and other financial institutions?
 - Do financial institutions that apply sustainability principles perform better or worse than otherwise comparable financial institutions?
 - Does applying sustainable principles result in higher or lower returns on financial products (e.g., project and asset finance products)?
 - What is the effectiveness of sustainability principles: do they actually lead to more socially and environmentally responsible projects?
- Reconciling the seeming anomaly between CSR and SRI
 - If CSR is found to enhance a firm's value and performance: why is this not reflected in SRI?

¹ See Orlitzky et al. (2003) and Hoepner & McMillan (2009) for a starting point on applying respectively meta-analysis and ILA on sustainability outcomes.

1 Introduction

As recognized today by leading CEOs and leading thinkers, ‘sustainability’ is a key issue for business leaders to understand and manage. Whilst the term ‘sustainability’ is being used to mean different things by different parties, this paper will follow the extended WCED definition of sustainability incorporating both environmental and human rights objectives, based on the Three-Dimension Concept of the ‘Declaration of Rio on Environment and Development’. The World Commission on Environment and Development (1987) defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The ‘Declaration of Rio on Environment and Development’ recognized that sustainable development is a balance of three dimensions: environmental protection, economic growth and social development (United Nations Conference on Environment and Development, 1992).² Research on finance & sustainability is still very much an emergent field. At the request of Duisenberg school of finance, SEO Economic Research has surveyed the literature on finance & sustainability. This has resulted in four reports, each providing a literature overview of one aspect of finance & sustainability:

- Financing the transition to sustainable energy;
- Carbon trading;
- Innovations in financing environmental and social sustainability; and
- Sustainable investment.

Each report provides comprehensive insights on a major topic within the field of finance & sustainability. Based on our findings from (academic) literature and relevant policy discussions, key topics per subject are identified and discussed. Moreover, areas where it is felt that the literature is underdeveloped have been identified in order to contribute to Duisenberg school of finance’s overall thinking about research objectives for its Programme on Finance & Sustainability. The topics as well as the broader scope and focus points of each topic, have been defined in close cooperation with Duisenberg school of finance.

This report highlights leading literature and empirical research on ‘sustainable investment’. Given the extensive body of literature in the field it is not meant to be all-encompassing, but is meant to provide the reader with a strong base from which to carry out further research and investigation. As this subject has already been studied extensively in the past (both theoretically and empirically), this report focuses on high-level issues and conclusions from a finance point of view. More specifically, in this report ‘sustainable investment’ is interpreted as covering two closely related topics: Corporate Social Responsibility (CSR) and Socially Responsible Investment (SRI).

There is no uniform definition of *Corporate Social Responsibility* (CSR). In this report Renneboog et al. (2007) is used, defining corporate social responsibility as a combination of good corporate

² In practical terms, the UN Global Compact – a framework for the development, implementation, and disclosure of sustainability policies and practices – has translated this into ten principles in the areas of human rights, labour, the environment and anti-corruption. These principles enjoy universal consensus (www.unglobalcompact.org).

governance, environmental efficiency and good stakeholder relations. CSR refers to sustainability at the individual company level. (Eurosif, 2008, p. 6) defines *Socially Responsible Investment* as the “generic term covering ethical investments, responsible investments, sustainable investments, and any other investment process that combines investors’ financial objectives with their concerns about environmental, social and governance (ESG) issues”. Contrary to CSR, SRI concerns sustainability at the investment, fund or portfolio level. It has an investors perspective, instead of a company perspective. One could argue that CSR and SRI are two sides of the same coin: investing in sustainable companies (SRI) requires the availability of companies that are socially responsible.

Literature and studies on the (financial) value of CSR are discussed in Chapter 2, focusing on the the financial drivers behind CSR and the consequences of CSR for company value. After that, literature about SRI will be addressed in Chapter 3, focusing on the profitability of sustainable investment and its success drivers.

2 Corporate Social Responsibility

2.1 Introduction

At the core of Corporate Social Responsibility (CSR) is the conviction that “business organizations have societal obligations which transcend economic functions of producing and distributing scarce goods and services and generating a satisfactory level of profits for their shareholders” (Epstein, 1989, p. 585). There is a myriad of definitions of CSR, which leads to different evaluations on its impact on company ‘outputs’ – more specifically, its impact on company performance (Aras & Crowther, 2009; Hill, Ainscough, Shank, & Manullang, 2007; Plinke, 2008).

Van Dijken (2007), after citing numerous CSR definitions, summarizes three main points that each of these definitions have in common:

- CSR addresses a company’s different stakeholders (as opposed to shareholders only), such as employees, communities, customers and suppliers and Non-Governmental Organizations (NGOs);
- CSR initiatives are voluntary and go beyond what is required by law; and
- CSR can have a strategic dimension – e.g., reaching a goal (long-term survival) with a limited amount of resources.

In short, there is no uniform definition of CSR. In this report, the definition of Renneboog et al. (2007) is adopted, as it offers a helpful framework for categorizing the various (empirical) research on the performance drivers and implications of CSR. Renneboog et al. (2007) define corporate social responsibility as a combination of:

- good corporate governance: protecting **shareholders’** interests;
- environmental efficiency: protecting **environmental stakeholders’** interest; and
- good stakeholder relations: protecting the interests of **stakeholders other** than shareholders and environmental stakeholders, including those of employees and the local community.

A fundamental question is whether there is a tradeoff between maximizing shareholder value and maximizing stakeholder value (Harold, Spitzer, & Emerson, 2007; Renneboog et al., 2007; Steger, 2004). One group of scholars – e.g., Friedman (1970) and Jensen (2002) – has argued that social responsibility detracts from a firm’s financial performance: “[a]ny discretionary expenditures on social betterment unnecessarily raise a firm’s costs, thereby putting it at an economic disadvantage in a competitive market” (Barnett & Salomon, 2006, p. 1102).

Another group of scholars has argued that a firm’s social performance can enhance its ability to attract resources, obtain quality employees, market its products and services and to create unforeseen opportunities (Barnett & Salomon, 2006; Cochran & Wood, 1984; Crowther, 2000; Fombrun, Gardberg, & Barnett, 2000; Greening & Turban, 2000; Harold et al., 2007; Steger, 2004; Turban & Greening, 1997; Waddock & Graves, 1997).

According to the theory of Adam Smith (1776), both goals can be achieved without any conflicts of interest: in competitive and complete markets, when all firms maximize their own profits, the resource allocation is Pareto-optimal and the social welfare is maximized. This would imply there is no trade-off between CSR and company performance. However, modern economic theory shows that with the existence of externalities, profit-maximization does not necessarily imply social-welfare maximization (Renneboog et al., 2007; Renneboog, Ter Horst, & Zhang, 2008b; Steger, 2004). The point of view by the authors directly challenging Friedman’s approach – both on economic and ethical bases – seems to be gaining momentum (Harold et al., 2007). The focus of the remainder of this chapter is on economic/financial rather than ethical arguments for CSR.

2.2 Value Drivers and Measurement

Steger (2004, p. 3) points out that “After about 450 interviews in 16 developed countries and a survey of over 1000 respondents, the bottom line [for CSR] is still not easy to draw” because “sustainability issues are extremely fragmented, uncertain, controversial and difficult to quantify”. Relevant sustainability issues are numerous, they differ from industry to industry, are highly uncertain and their business relevance is often either unclear or discussed in a confusing cloud of controversy. Renneboog et al. (2008b) also mention that in order to make CSR a “workable concept”, corporate performance should be measurable.

This raises the question how companies (should) value their sustainable activities: how can they measure the value that is created by CSR? In this regard, finance literature focuses on monetization of shareholder or stakeholder value.³ This usually concerns either market prices (such as stock prices/returns) or other corporate finance ratios, such as return on equity or return on assets (Kim & Van Dam, 2003; Orlitzky et al., 2003; Pelozo & Shang, 2010).⁴

Other, more indirect approaches exist as well. Godfrey et al. (2009), for instance, focus on the *preservation* of Corporate Financial Performance (CFP) through CSR, rather than the *generation* of economic value. They argue that the goodwill or moral capital a firm builds up through CSR activities, acts as ‘insurance-like’ protection (or value preservation) when negative events occur. Contrary to the economic value generation research angle, the insurance perspective is, the authors note, relatively under exposed in current empirical literature.

Another approach is the ‘customer/marketing outcome’ of sustainability. CSR activities have been attributed to increase customer loyalty, a willingness to pay premium prices, a decreased blame attribution in the face of a (product-harm) crisis and increased brand value (Creyer & Ross, 1996; Du, Bhattacharya, & Sen, 2007; Klein & Dawar, 2004; UNEP, 2006).⁵ Barnett (2005)

³ There are other perspectives to value CSR rather than from a financial point of view. ‘Doing things the right way’ (or even altruism) might also provide value/utility to the individual company owner, manager or employee. However, this paper focuses on financial criteria.

⁴ UNEP (2006) mentions five valuation tools that have emerged in recent years: benchmarking, scenario analysis, proprietary valuation methodologies and case studies. They admit, however, that “further development [of valuation tools] is clearly desirable”. Kim et al. (2003) suggest that the economic value and reputational value created by CSR, should be measured using respectively Value Based Management (VBM) and Economic Value Added (EVA) and the ‘Reputation Quotient’ (developed by the Reputation Institute).

⁵ Pelozo & Shang (2010, pp. 9-11) provide an extensive overview of empirical literature on the causality between CSR and marketing outcomes (generally customer-related).

adopts a slightly wider perspective by arguing that the ability of CSR to create firm value lies in its ability to generate positive stakeholder relations (i.e., not just customer relations) for the firm.

Kim et al. (2003) add ‘parenting advantage’ to CSR’s value drivers – leveraging existing CSR-related capabilities throughout the company (through the horizontal and vertical linkages that exist within a company) or by building a ‘CSR business line’ (a business model that is entirely based on corporate social responsibility).

Godfrey et al. (2009) make the point that given that risk reduction, customer/stakeholder outcomes and ‘parenting advantages’ (eventually) could also add value to shareholders, they can eventually be measured by the same bottom line.

2.3 The Business Case for CSR

2.3.1 The Value of Sustainable Companies

In general, empirical literature concludes that CSR enhances a company’s financial performance (Godfrey et al., 2009; Hill et al., 2007; Renneboog et al., 2007, 2008b; Shank, Manullang, & Hill, 2005; UNEP, 2006).

In theory, the ‘value drivers’ that support the business case for CSR include operational efficiency opportunities, increased brand value and reputation, better risk management, attracting and retaining talented employees and pre-empting regulatory intervention (Crowther, 2000; Steger, 2004). Harold et al. (2007) point at similar theoretical linkage between environmental and financial performance (Table 1).

Table 1 Environmental performance and company value

	Increase company value	Decrease company value
Direct revenue impact	<ul style="list-style-type: none"> Green products and services that appeal to consumers 	<ul style="list-style-type: none"> Boycotts or decreased demand because of perception of negative environmental qualities
Indirect revenue impact	<ul style="list-style-type: none"> Potential for regulatory advantage versus competitors Improvement in employee morale and productivity 	<ul style="list-style-type: none"> Potential for regulatory disadvantage versus competitors
Direct cost impact	<ul style="list-style-type: none"> Reduction in waste-disposal costs 	<ul style="list-style-type: none"> Commodity price variation
Indirect cost impact	<ul style="list-style-type: none"> Decrease in staff turnover costs 	<ul style="list-style-type: none"> Higher insurance premiums Legal fees PR costs Increase in costs due to long-term environmental change (e.g., climate)

Source: Adapted from Harold et al. (2007, p. 9)

Empirical literature is diverse in its research angles. The remainder of this section is dedicated to studies on the empirical relationship between company value and CSR. Empirical findings are categorized according to the three ‘pillars’ of CSR that were introduced in paragraph 2.1: (i) corporate governance (protecting shareholders’ interests), (ii) environmental efficiency (protecting environmental stakeholders’ interest), and (iii) stakeholder relations. Although diverse

in its research questions and methodologies, empirical literature generally points to a positive link between CSR and company performance.

Corporate Governance

The relationship between corporate governance, defined by Tirole (2001) as “the design of institutions that induce or force management to internalize the welfare of stakeholders”, and the firm’s (subsequent) value (e.g., measured by stock price or stock return) has been examined empirically by various authors.

Gompers et al. (2003) have shown a positive relation between corporate governance and stock returns. Based on a research on 1,500 companies, they conclude that by buying companies with the strongest shareholder rights and selling those with the weakest shareholder rights, an abnormal yearly return of 8.5% resulted in the 1990s.

Bauer et al. (2004) applied the same (GIM⁶) methodology for European companies, and found that good corporate governance – they use the overall governance ratings from Deminor Corporate Governance Ratings, which are the aggregates of 300 criteria covering shareholder rights, takeover defense, information disclosure and board structure – leads to higher stock returns and higher firm value.

From their empirical analysis Godfrey et al. (2009) conclude that participation in *institutional* CSR activities (ICSRs), aimed at a firm’s secondary stakeholders⁷ or society at large, which provides an ‘insurance-like’ benefit and thus creates value for shareholders. They focus on the preservation of a company’s value through insurance-like protection (see also paragraph 2.2).

Other studies pointing at a positive relation between corporate governance and a firm’s value, include La Porta et al. (2002) and Cremers & Nair (2005).

Environment

A growing body of empirical literature reports a positive relation between corporate environmental performance and firm value (Renneboog et al., 2007, 2008b).

Klassen & McLaughlin (1996) find (statistically) significant positive abnormal returns after a firm receives environmental performance awards, and significant negative returns after an environmental crisis. Dowell et al. (2000) find that US-based multinational enterprises adopting a stringent global environmental standard have much higher market values than firms with less stringent standards. Konar & Cohen (2001) conclude that poor environmental performance is negatively correlated with the intangible asset value. Derwall et al. (2005) show that a portfolio of firms with high environmental scores (based on positive screening) outperforms a portfolio of firms with low scores by 6% per annum over the period 1997-2003.

⁶ The *GIM methodology* refers to the empirical analysis by Gompers, Ishii and Metrick (2003).

⁷ *Primary* stakeholders make legitimate claims on the firm and its managers and have both urgency and power (utilitarian, coercive, or normative) to enforce those claims. *Secondary* stakeholders have legitimate claims on the firm, but lack both urgency and power to enforce those claims (Mitchell, Agle, & Wood, 1997).

Hamilton (1995) documented a (statistically) significant negative impact of the announcements of the release of information on the use of toxic chemicals on stock prices in the US. Ten years later, Gupta & Goldar (2005) studied the impact of public disclosure of environmental performance on the financial performance of firms, i.e. the impact of environmental rating of large pulp and paper, auto, and chlor-alkali firms in India on their stock prices. They also find that the market generally penalizes environmentally unfriendly behavior: the announcement of weak environmental performance by firms leads to negative abnormal returns of up to 30%.⁸

Hong & Kacperczyk (2009) elaborate the concept of ‘sin stocks’ – publicly traded companies involved in e.g. producing alcohol, tobacco, and gaming. They find that these sin stocks have less institutional ownership, i.e. they are less held by norm-constrained institutions (such as pension plans) compared with mutual or hedge funds that are natural arbitrageurs. They also received less coverage from analysts during the researched period (1976-2003) than stocks of otherwise comparable characteristics. Furthermore, they are cheaper than otherwise comparable stocks (i.e., have a higher book-to-market ratio), which indicates they are “neglected by norm-constrained investors and facing greater litigation risk heightened by social norms” (Hong & Kacperczyk, 2009, p. 1). In other words, according to their research social norms affect stock prices and returns. This implies that ‘sinful’ companies are punished by the financial markets by lowering their value.⁹

Halkos & Sepetis (2007) show that improved environmental management system and environmental performance result in reductions in firms’ beta.¹⁰ Firms making reference to their environmental policy in annual financial reports and firms publishing an annual social report, see a beta reduction in the period 2001-2004 compared to the period 1998-2001.

Nakao et al. (2007) claim that Japanese firm data show a two-way positive interaction between environmental performance and financial performance: a firm’s environmental performance has a positive impact on its financial performance and vice versa. They used five years’ financial data from approximately 300 listed firms as well as the results of the Nikkei environmental management surveys.

Other studies finding similar correlation/causality between financial and environmental performance, include Annandale et al. (2001) and Dasgupta et al. (2002).

Stakeholder Relations

Empirical studies on the relationship between corporate performance and corporate stakeholder relations are scarce. Hillmann & Keim (2001) show that management focusing on *stakeholder value* (improving the relationships with primary stakeholders like employees, customers, suppliers and communities) also creates shareholder value, while *social issue participation* (e.g., a ban on nuclear energy and avoidance of ‘sin’ industries) often destroys shareholder value. Goergen & Renneboog (2002) analysed the relationship between control concentration (e.g., the existence of a major shareholder) and CSR (stakeholder management and social issue participation) but failed to find (statistically) significant results. Orlitzky et al. (2003), conducting a meta-analysis of 52

⁸ See Guenster et al. (2010) for a similar study.

⁹ See Statman & Glushkov (2008) for more research on sin stocks.

¹⁰ The *beta* is a measure of the volatility of a firm’s stock compared to the overall market (the market’s beta is 1). The higher a firm’s beta, the greater its systematic risk (Halkos & Sepetis, 2007).

studies (yielding a total sample size of 33,878 observations), find that CSR is positively related to financial performance, although more with retrospective financial measures (accounting returns) than with forward-looking financial indicators (e.g., shareholder returns).

Box 2 CSR-Corporate Financial Performance (CFP) studies at sristudies.org

The website sristudies.org is an initiative of the Moskowitz Research Program, affiliated with the Center for Responsible Business at Haas School of Business (UC Berkeley). It provides an overview of 'key studies' "that every practitioner of SRI should know about". The more recent of these studies, ones that concern the relationship between CSR and company performance, have already been discussed above. However, for further reading this website provides an excellent starting point. The bibliography covers over 300 articles and books on CSR and SRI.

2.3.2 Implications for Investment and Investors

The cost of capital for any company is related to the perceived risk associated with investing in that company. This implies a direct correlation between the risk involved in an investment and the rewards which are expected to accrue from a successful investment. Companies with positive environmental records are (at least in theory) rewarded with a lower cost of capital, since they are less risky to investors (Harold et al., 2007). Some empirical evidence is found that the sustainability a firm demonstrates indeed influences its creditworthiness as part of its financial performance (Weber, Scholz, & Michalik, 2010).

Some authors also suggest that CSR is sometimes used to 'mislead' investors. Aras & Crowther (2009, p. 279) argue that the (future) effects of corporate activity upon its external environment can be obscured/clouded by environmental statements (e.g., an annual sustainability report) so that "the cost of capital for the firm is reduced as investors are misled into thinking that the level of risk involved in their investment is lower than it actually is". This obfuscation could be fuelled by a lack of a full understanding of what is meant by 'sustainability' and the fact that risk evaluation methodologies often are deficient in their evaluation of environmental risk (Aras & Crowther, 2009).

CSR and sustainable investment opportunities (SRI) are closely related. At the stock/company level, CSR influences profitability, thereby enhancing or reducing the company's share price. At the fund/portfolio level, combined individual share performance influences the risk-return characteristics of the portfolio, either positively (well-performing CSR shares) or negatively (ill-performing CSR shares). Also, sustainability screening could influence the 'investment universe', as non-sustainable (or 'sin') stocks are unavailable (Plinke, 2008). These topics are further discussed in Chapter 3.

2.4 Reporting Requirements

CSR can also be driven (or 'imposed') by reporting requirements, either on a regulatory or voluntary basis. CSR-related legislation, however, is not widespread. In fact, Renneboog et al. (2008b, p. 1728) mention that "France is the first and so far the only country making social, environmental and ethical reporting mandatory for all listed companies". Since 2009, Denmark

has been added to this short list.¹¹ Similarly the Swedish government decided to statutory sustainability reporting for all public companies. This law took effect on January 1st 2009 (Nilsson & Nilsson, 2010).

The reason for the lack of CSR-regulation could lie in the general consideration that “CSR initiatives are voluntary and go beyond what is required by law” (van Dijken, 2007, p. 142), although whether self-regulation is sufficient to guarantee corporate social responsibility, is still a matter of debate.¹²

In general, many companies voluntarily report on the corporation principles, ethics, rules of conduct and philosophical value as they relate to employees, shareholders, the environment and stakeholders. According to Andrew (2008), there has been an increase in the number of companies trying to show their ethical credentials. They realize that stakeholders demand more information and accountability for actions undertaken by the company. Furthermore, socially responsible activity enhances economic performance (section 2.2). Hence, companies realize that sustainability is important and often voluntarily include it in their reporting.¹³

2.5 Conclusion

This paper is a literature overview and covers the most current research on CSR. A few of many interesting financial aspects of CSR have been discussed. Based on the literature discussed in this chapter, no unequivocal conclusion on the financial implications of corporate social responsibility can be drawn. Nevertheless, the theoretic papers addressed in this report point at numerous channels through which CSR creates financial value for companies, and the empirical studies under review generally indicate that CSR enhances corporate financial performance. There seems consensus amongst these authors that the relationship between a company’s performance and its level of sustainability is a positive one, although further research is advised by nearly all.

¹¹ See the website of the Danish Government Centre for CSR: www.csrgov.dk. CSR is not obligatory as such, but if a company has no policy, it must state its positioning on CSR in their annual financial report. This is similar to the comply-or-explain axiom underlying several corporate governance codes, *inter alia* the ‘Tabaksblat Code’ in The Netherlands (Akkermans et al., 2007).

¹² For further discussion see for instance UNRISD (Utting, 2004).

¹³ However, the increase of reporting sustainability by companies will not necessarily mean there is an increasing concern with this subject. It might be the case that companies include sustainability in their reporting for benefits such as tax breaks (Gil-Bazo, Ruiz-Verdú, & Santos, 2010).

3 Socially Responsible Investment

3.1 Introduction

In line with the increased attention on climate change, corporate governance and community investing, Socially Responsible Investment (SRI) has shown rapid growth. SRI is an investment process that does not only look at the financial analysis but also takes into account the environmental, social and governance consequences of investments.¹⁴ These consequences can be both positive or negative. Funds, (investment) banks, pension funds and other financial institutions (FI) and investors, use a set of screens to select investments. These screens might be based on social, environmental or ethical (SEE) criteria (Renneboog et al., 2007), sometimes also referred to as environmental, social and governance (ESG) criteria (Eurosif, 2008; Reichelt, 2010).

More specifically, financial institutions and investors use sustainability information to screen investment opportunities and/or to influence management of the companies they fund (Mulder, 2007):

1. **Positive selection (screening)** of corporations: The selection of stocks of companies that perform best against a defined set of sustainability criteria (best-of-class approach);
2. **Engagement with management:** Influencing corporate policy through associated rights of being an investor;
3. **Voting power** at Annual General Meetings (proxy voting);
4. **Negative screening** or exclusion. For example the exclusion of the weapons or tobacco industry.¹⁵

3.2 Reasons for SRI

3.2.1 Financial Attractiveness

From a finance perspective, there are principally three reasons why investors incorporate sustainability information in their investment decisions. The first is the (relative) financial attractiveness of sustainable investments (compared to 'conventional' investments), usually measured in terms of returns. The bulk of SRI literature focuses on the question whether SRI funds perform better or worse than conventional funds. This empirical body will be discussed in section 3.3.

This picture of financial attractiveness of SRI seems, however, not complete. A point not often cited is that financial institutions, notably banks, can distinguish between sustainable and non-sustainable companies when offering/granting them financial products, e.g., project finance, and

¹⁴ Sometimes the distinction is made between Responsible Investment/RI (related to institutional investors and mainstream financial community), Socially Responsible Investment/SRI (related to the retail financial sector) and Sustainable Investment/SI (alignment between financial institutions committed to sustainability and investors).

¹⁵ See also Table 4 in Appendix A.

asset based finance, reflecting investment decisions by the FI.¹⁶ These decisions will be based, at least partly, on financial attractiveness as well (i.e., expected returns). Since this type of information generally is not public, studies on the attractiveness of these financial products are sparse. Mulder (2007, p. xi) is an exception. He points out that FI are exposed to sustainability risks both directly and indirectly. *Direct risks* include reputational risks, liability risk and regulatory scrutiny. *Indirect risks* refer to the financial products they provide (e.g., loans and investment portfolios): if FIs are unable to identify which companies are most at risk, they can be exposed to increased risk for default (credit activities), lower investment returns (investment portfolios) or an increase in insurance claims (insurance activities). Coulson (2009, p. 154), Hansen (2006) and Papadopoulos (2009, pp. 13-14) offer similar liability and (credit and reputational) risk argumentation for FIs incorporating sustainability information in their business operations.

Despite the scarce amount of research on the link between FI incorporating sustainability information and their (relative) financial performance, it could be argued that SRI fund performance offers a potential proxy for the financial attractiveness of using SEE criteria when deciding on other financial products, in particular for the attractiveness of ‘sustainable’ project finance.¹⁷

3.2.2 Compliance

The second major reason for incorporating sustainability information in investment decisions is compliance, either to legislation or to voluntary standards. The latter are often the result of ‘public pressure’, e.g., bad publicity and pressure from non-governmental organizations (NGOs). This motive is closely related to reporting requirements (resulting either from regulation or self-regulation).

Legislation

According to Renneboog et al. (2008b) the SRI industry has been able to grow, partly because of changes in regulation. Since 2000, several countries implemented bills in which the disclosure of social, environmental and ethical (SEE) information becomes compulsory. The first country to implement such regulation was the United Kingdom, which obligated trustees of occupational pension funds as from 2000 to state to what extent the selection of investments is influenced by SEE considerations.

Other countries followed. Today, most (Western) European countries have adopted SRI regulation, but there is no mandatory transparency law at European level. The European Parliament is working on increasing the transparency of institutional investors. Eurosif is trying to introduce an EU-wide Statement of Investment Principles (SIPs) for investment funds. By establishing this, pension fund trustees would be obliged to report on how they are taking Environmental, Social and Governance (ESG) risks into consideration (Eurosif, 2008).

¹⁶ As these products are at the heart of their corporate activities (their *raison-d'être*), it determines whether the financial institutions are in fact socially responsible themselves. In other words, one could argue it is CSR practiced by financial institutions.

In a sense, financial institutions play a ‘dual role’ as they also offer financial products that allow investors to invest socially responsible (e.g., green funds).

¹⁷ Both capital sources (project finance and funds) typically appear in different stages of the project life cycle (Biermans, Grand, Kerste, & Weda, 2009). This might result in differences in the impact of SRI on financial attractiveness, and offer an interesting venue for future research..

Table 5 in Appendix A provides an overview of SRI regulation per (western) country.

Voluntary Standards

In addition to regulation there is an increase in voluntarily adopted measures to enhance the disclosure of information about the nature of companies and/or projects. The argumentation for voluntary standards is as follows. Many companies apply for loans to implement their projects and that Through the provision of financial products (e.g., loans, project finance and insurance), financial institutions can indirectly influence the sustainable developments by voluntarily adopting standards that limit their business to projects that are developed in a socially responsible manner and that reflect sound environmental management practices. This way, negative impacts on project-affected ecosystems and communities could be avoided where possible and, if these impacts are unavoidable, they should be reduced, mitigated and/or compensated for appropriately (Andrew, 2008; Papadopoulos, 2009; Richardson, 2007).

A well-known example in this regard is the development of the *Equator Principles* (EPs) in 2003 (Box 3). Other examples include the Global Reporting Initiative (GRI)¹⁸ and normative frameworks such and the Collevocchio Declaration. See Box 4 and Table 6 of Appendix A for more information on voluntary standards related to SRI.

Box 3 The Equator Principles

Parties adopting the EP promise commitment to environmental assessment based on: (i) compliance with host country laws, regulations and permits applicable to the project; (ii) World Bank and IFC Specific Guidelines; and (iii) the IFC Safeguard Policies and IFC Pollution Prevention and Abatement Guidelines for the relevant industry sector (Coulson, 2009).

More than 65 banks have adopted these principles and apply them to projects worldwide. These banks have become known as the *Equator Principles Financial Institutions* (EPFIs). Because banks can voluntarily apply these principles, there were some initial challenges with actual fulfillment of the requirements. Since 2006 there are stronger covenants to ensure compliance. There is however still a disclaimer included in the principles, preventing that banks are faced with punitive actions for not disclosing information. More generally, there are concerns about the enforceability of the principles with the current lack of legal recourse (Andrew, 2008; Papadopoulos, 2009). Furthermore, critics point to failure to reach agreement on how one can evaluate the impact of Equator adoption on both bank and borrower performance, a lack of disclosure by banks, and evidence that banks subjected to the EPs still support investment in controversial project and activities (Coulson, 2009).

There has been debate on the *economic* incentives (as opposed to compliance incentives) for financial institutions for constituting and adopting the Equator Principles. Almaric (2005) argues that the effectiveness of the EPs – i.e., the likelihood of EPs contributing to sustainability objectives – is highly dependent on the economic drivers underlying the EPs. If EPs are a strategy devised by high reputation risk banks to restore the level playing field with their less exposed competitors, and/or if they serve to counter critics of large development projects (e.g., large-scale dams), the likelihood of EPs contributing to sustainability objectives is small. Likewise, Wright & Rwabizambuga (2006, p. 90) offer evidence that “codes of conduct are primarily adopted by firms as signaling devices for demonstrating positive credentials, with the aim of strengthening

¹⁸ The Global Reporting Initiative (GRI, www.globalreporting.org) was launched by the Coalition for Environmentally Responsible Economics (CERES) and UNEP in 1997. This “multistakeholder process” created an internationally applicable framework for reporting on sustainability issues (including a sector-specific supplement for the financial sector (GRI, *Financial Services Sector Supplement: Environmental Performance, Pilot Version 1.0*, March 2005): reporting principles and specific indicators to guide sustainability reporting for companies and other organizations. The third generation of these guidelines, issued in 2006, are known as G-3. GRI has become the dominant standard for non-financial reporting (Richardson, 2007). KPMG (Kolk, van der Veen, Pinkse, & Fortanier, 2005, p. 20) states that 40 percent of respondents in their CSR reporting study noted that the GRI was determinative of the content of their company’s sustainability report. See also Willis (2003) and the [GRI Register](#).

corporate reputation and organizational legitimacy more generally". Scholtens & Dam (2007) reach a similar verdict: their analysis shows that CSR policies are rated significantly higher if FIs have adopted the EPs, and that adopters of the EPs tend to be bigger firms (i.e., banks that are in the spotlights).

Financial institutions are reluctant to disclose information about the processing and assessing of project finance because it would infringe client confidentiality. Whether the adoption of the principles actually leads to more socially and environmentally responsible projects, would be worth further investigation, ideally using data about the projects and their characteristics and data about CSR performance on a project basis. Additionally, future research on this subject could also focus on analyzing differences in *financial* performance between banks applying the principles and banks that do not. (Andrew, 2008; Papadopoulos, 2009; Scholtens & Dam, 2007, p. 1322). Some of the sparse empirical work on this topic is done by Scholten & Dam.

Scholtens & Dam (2007) find (indirect) evidence that signing up to the Equator Principles (EP) is associated with higher costs, similar to previous reasoning by Wright & Rwabizambuga (2006). They also conclude that "[t]he combination of observing larger banks adopting the EP and observing lower operational profits for these banks suggests that adopting the EP[s] is not window dressing but exhibits some real costs" (Scholtens & Dam, 2007, p. 1322). For larger banks, according to the authors, the benefits of signing up to the EPs outweigh the costs. Their logic is that "[s]everal event studies showed that shareholders did not react negatively to signing up, which implies that shareholders expect that adhering to the Equator Principles will not significantly affect shareholder value". This could either imply that project finance is merely a small part of their total business, or that there is no (direct) tradeoff between banks' CSR and their stock returns.

Note also that FIs benefit from the CSR reporting initiatives by companies (either voluntarily or compliance-based) in the sense that it helps *them* comply with their sustainability (reporting) requirements, such as the EPs, more easily. As funding (and other financial products, such as insurance) is at the core of FIs' activities, the increased importance of CSR and CSR reporting for companies (see section 2.4) implies that voluntary SRI codes of conduct are becoming continually more relevant.

3.2.3 Salient Information

The third reason for incorporating sustainability information is that it provides more information about a company, information that can be salient. E.g., sound social and environmental performance might signal high managerial quality, which translates into favourable financial performance (Renneboog, Ter Horst, & Zhang, 2008a; Renneboog et al., 2008b).¹⁹

Vice versa, firms may use CSR disclosures as one of the informational signals upon which stakeholders base their assessments of corporate reputation under conditions of incomplete information. For instance, high CSR reputation ratings may improve relations with bankers and investors and thus facilitate their access to capital (Fombrun & Shanley, 1990; Orlitzky et al., 2003; Spicer, 1978).

¹⁹ Renneboog et al. (2008a; 2008b) consider this signalling function as an argument for their 'outperforming SRI hypothesis' (see paragraph 3.3.5).

3.3 Performance of Sustainable Funds

The performance of SRI funds in comparison with conventional funds has been the subject of many empirical studies and many econometric methodologies.²⁰ This section will discuss their key conclusions as well as identify shortcomings. First, theory on differences in performance between sustainable and conventional funds is covered in paragraph 3.3.1. The remainder of this paragraph discusses a series of Mutual Fund Studies aimed at identifying the performance of SRI funds. After a general overview in paragraph 3.3.2, paragraphs 3.3.3 to 3.3.5 discuss the impact of regional differences and short run versus long run results, respectively the use of more sophisticated econometric models.

3.3.1 Underlying Theory

Renneboog et al. (2007) suggest that there are three hypotheses regarding the relationship between SRI screening and SRI fund performance:

1. SRI funds underperform compared to conventional funds;
2. SRI funds outperform conventional funds;
3. SRI portfolios have different risk exposures than conventional funds.

The first two hypotheses are about risk-adjusted returns (sometimes referred to as ‘alphas’), while the last hypothesis is about the risk exposures (betas) of SRI portfolios.

The first hypothesis states that SRI screens imply a constraint on the investment universe (the exclusion of ‘sin stocks’) and therefore impose a limit on diversification possibilities. According to this hypothesis SRI funds should underperform conventional funds.

The first hypothesis correlates with the efficiency of optimizing risks and returns, i.e., whether it is possible to exclude or include stocks without loss of efficiency. Geczy et al. (2005, p. 3) argue that SRI constraints can impose diversification costs, “in the sense that the constrained investors are less able to balance optimally their portfolios’ exposures to factor-related risks and to eliminate risks that, on average, investors are not compensated to bear”. They conclude that SRI constraints impose large costs on investors who rely heavily on individual funds’ track records to predict future performance. See also Barnett et al. (2006), Bello (2005), Galema et al. (2008), Hoepner et al. (2009) and Renneboog et al. (2007; 2008b) for further reading on the diversification cost of investing in SRI funds.

The second hypothesis is that SRI portfolios outperform their conventional peers as information on corporate governance and environmental performance is underpriced by the stock markets: SRI screening generates value-relevant non-public information that helps fund managers to select securities and consequently generate better risk-adjusted returns than conventional mutual funds.

The second hypothesis thus implies that the screening process for SRI funds generates information which is normally not available for investors. This extra information can result in a

²⁰ See Renneboog et al. (2007) for an overview of the latter, including Mean-Variance Analysis (mean-variance optimization, generalized Jensen’s alpha, generalized Sharpe ratio), Performance Evaluation Methodologies (Capital Asset Pricing Model, multifactor models, conditional strategies, seemingly unrelated assets), market-timing ability and return-based style analysis.

better selection and hence generate better risk-adjusted returns. The underlying arguments are that sound social and environmental performance indicates good managerial quality which results in a higher financial performance. Also, screening based on social and environmental criteria reduces the potential costs during corporate social crises or environmental disasters. The implications for SRI is a subject for future research. (Renneboog et al., 2008b).

A key assumption underlying the 2nd hypothesis is that conventional portfolio managers do not use all value-relevant information, which is at odds with the market efficiency theory: some claim that, since SRI portfolios are based on public information such as CSR issues, they cannot generate a better return than ‘normal’ funds (Barnett & Salomon, 2006; Bollen, 2007; Halkos & Sepetis, 2007; Harold et al., 2007; Renneboog et al., 2008a, 2008b; Soppe, 2004). This *Efficient Market Hypothesis* (EMH) refers to “a market where, given the available information, actual prices at every point in time represent very good estimates of intrinsic values” (Fama, 1970, p. 90).²¹

The third hypothesis claims that SRI portfolios have different risk exposures and therefore different expected returns than conventional portfolios. For example, companies with sound environmental performance may have a lower book-to-market ratio than companies with poor environmental performance, which results in SRI portfolios having a lower risk exposure to the book-to-market factor in the *Fama-French Pricing Model* than a conventional portfolio (Dowell et al., 2000).²² A lower book-to-market ratio is generally assumed to be the result of SRI stocks being overpriced vis-à-vis conventional stocks due to excess demand (Galema et al., 2008).²³

3.3.2 Mutual Fund Studies

Empirical research on the (relative) performance of SRI funds was, until 2 to 3 years ago, dominated by mutual fund studies that measure the performance of a SRI portfolio using a single index model and/or compare the performance of SRI funds with that of a reference group identified by a “matched-pair” analysis, in which SRI funds are matched to conventional mutual funds with similar investment objective and fund size (Renneboog *et al.*, 2007, p. 25, 2008b, p. 1739).

Most of these mutual fund studies are unable to conclude that SRI underperform or outperform conventional funds, as most research brings forward statistically insignificant results (Benson, Brailsford, & Humphrey, 2006; Benson & Humphrey, 2008; Harold et al., 2007; Mulder, 2007; Plinke, 2008; Renneboog et al., 2007, 2008b).

²¹ Usually a taxonomy of three EMHs are distinguished (Fama, 1991): the *weak* form of efficiency (the information set includes only the history of prices), the *semi-strong* form efficiency (the information set includes all information known to all market participants; i.e., all publicly available information) and the *strong* form of efficiency (the information set includes all information known to any market participant, including private information).

²² The Fama-French *pricing* (or *three factor*) *model* (1993) evaluates fund performance. It consists of the capital asset pricing model (CAPM) plus two additional factors: the market capitalization factor (SMB) and the book-to-market factor (HML).

²³ Or, vice versa, from ‘sin stocks’ being underpriced due to a lack of demand.

Only a few show significant results that point either at underperformance or outperformance of SRI-funds, but this is only in specific regions/countries or dependent on performance period (the short, medium or long run) which is discussed in paragraph 3.3.3 respectively 3.3.4.²⁴

Renneboog et al. (2008b) give an excellent and extensive overview of findings of studies on the performance of SRI funds/portfolios:²⁵

Table 2 Overview of SRI performance studies (sorted by publication date)²⁶

Study	Country	Outcome	Comments
Luther et al. (1992)	UK	NSD	The Jensen's alphas of ethical funds have mean of 0.03% per month (not significantly different from 0). Ethical funds have relatively high portfolio weights on small-cap companies.
Luther & Matatko (1994)	UK	NSD	The Jensen's alphas of ethical funds are measured against the FT. All share index or against a small-cap index. R-squared is higher in the first regression than the second one, which implies that the SRI portfolio is biased towards small-caps. The average alphas measured in both ways are not significantly different from zero .
Hamilton et al. (1993)	US	NSD	For 17 SRI funds established before 1985, the average alpha is -0.06% per month, which is higher than the average monthly alpha (-0.14%) of 170 non-SRI funds (the difference is not significant). Meanwhile for the 15 SRI funds with shorter history, i.e. established after 1985, the average alpha is -0.28% per month, which is worse than the average monthly alpha (-0.04%) of the corresponding 150 non-SRI funds.
Mallin et al. (1995)	UK	NSD	The monthly alphas of ethical funds range from -0.28% to 1.21%, while 22 out of the 29 alphas are positive. Alphas of non-ethical funds, 23 of which being positive, range from -0.41% to 1.56% per month (difference is not statistically different).
Gregory et al. (1997)	UK	Mixed	The alphas of ethical funds range from -0.71% to 0.24% per month (almost all are not significant). In a regression with both ethical and non-ethical funds, the ethical fund dummy does not have a significant impact on fund performance after controlling for fund age, size, and the market risk. Most of the ethical funds have a significant exposure to the small-cap factor.
Goldreyer et al. (1999)	US	NSD	The average Jensen's alpha of 29 SRI equity funds is -0.49% per annum, whereas that of 20 non-SRI equity funds is 2.78%. The difference is not significant . SRI funds using positive screens outperform the SRI funds that do not (the average monthly alphas are -0.11% and -0.81%, respectively, and the difference between them is statistically significant).
Statman (2000)	US	NSD	The average monthly alpha is -0.42% for SRI funds and -0.62% for non-SRI funds; the difference is not significant (t-statistics = 1.84). The DSI 400 index has a higher Sharpe ratio than the S&P 500 index (0.97 vs. 0.92).
Schroder (2004)	Germany, Switzerland, and US	NSD	The monthly alphas range from -2.06% to 0.87%. 38 out of the 46 alphas are negative; only 4 of them are significant at 0.05 level. SRI funds do not significantly underperform the benchmark portfolio consisting of both large stocks and small stocks. Note that 11 out of the 16 German and Swiss funds have higher exposures to the small-cap index than to the large-cap index. Only 5 out of the 46 funds have positive timing ability, while 7 fund managers time the market in the wrong direction.
Kreander et al. (2005)	Europe	NSD	The average Jensen's alphas of SRI and non-SRI funds are 0.20% and 0.12% per month, respectively (difference is statistically insignificant). In addition, the market timing coefficients are similar for the two types of funds (-0.29 vs. -0.28), and each of them is significant at the 95% level. However, the signs of the timing coefficients are negative, which implies that both SRI and non-SRI fund managers time the market in the wrong direction.

²⁴ The general conclusion that there is no (statistically significant) difference in performance between SRI funds and conventional funds, even though social and environmental standards restrict the investment universe of SRI funds, has spurred the debate on whether SRI funds really differ from conventional funds (i.e., do they invest according to social and environmental standards), or whether they are merely conventional funds in disguise. Kempf & Osthoff (2008) explore this subject. They find that US SRI equity funds indeed have higher ethical ranking and therefore are not conventional funds in disguise.

²⁵ Plinke (2008) offers a similar synopsis. This can be found in Table 3 of Appendix A.

²⁶ The quality of financial data used in SRI studies is subject of some debate. This is a research area in its own and first and foremost the expertise of methodologists. Therefore it is beyond the scope of this paper. A good starting point for further reading on the subject of data quality is Chatterji & Levine (2005) and Hoepner & McMillan (2009).

Study	Country	Outcome	Comments
Bauer et al. (2005)	Germany, UK, and US	US: mixed UK: OP DE: mixed	Ethical funds have smaller size and higher expense ratio than conventional funds. The average monthly alphas of SRI funds are 0.29%, 0.09% and -0.05% for Germany, UK domestic and US domestic funds, respectively. The US domestic ethical funds significantly underperform conventional domestic funds, while for US international funds the difference in returns between ethical and conventional funds is insignificant . The UK ethical funds , both domestic and international funds, significantly outperform conventional funds. The difference in average alphas between German SRI and non-SRI funds is insignificant . Overall, there is little evidence of significant differences in risk-adjusted returns between SRI and non-SRI funds For German and US ethical funds: after significant underperformance in the early 1990s, they match conventional fund performance over 1998-2001. Older ethical funds (launched before 1998) outperform younger ethical funds. German and UK ethical funds are heavily exposed to small-cap stocks while US funds are less so. All SRI funds are more growth-than value-oriented.
Renneboog et al. (2005)	World-wide		Ethical money chases past returns. In contrast to conventional funds' investors, SRI investors care less about the funds' risks and fees. Funds characterized by shareholder activism and by in-house SRI research attract more stable investors. Membership of a large SRI fund family creates higher flow volatility due to the lower fees to reallocate money within the fund family. SRI funds receiving most of the money-inflows perform worse in the future, which is consistent with theories of decreasing returns to scale in the mutual fund industry. Finally, the money-flows and the flow-past performance relationship crucially depend on the types and intensities of SRI screening activities
Geczy et al. (2005)	US	NSD	The average expense ratio of SRI funds is higher than that of non-SRI funds (1.33% vs. 1.10%), whereas the average annual turnover of SRI funds is much lower than that of non-SRI funds (81.5% vs. 175.4%). The SRI funds have much smaller size than non-SRI funds: the average asset under management (across time and across funds) is \$149 million and \$257 million, respectively. The monthly alpha of the SRI portfolio is higher than that of the non-SRI portfolio (0.21% vs. 0.08%), but the difference is insignificant . Meanwhile, the risk exposure of the SRI portfolio to the size factor (SMB factor) is higher than that of the non-SRI portfolio (0.20 vs. 0.16). To a market index investor the financial cost of the SRI constraint is 5 basis points per month. The SRI constraint imposes large costs, more than 1.5% per month, on investors whose beliefs allow selection skill. Moreover, further restricting the SRI universe to the funds that screen out "sin" stocks (e.g. alcohol, tobacco or gambling) increases the monthly cost of the SRI constraint by 10 basis points or more.
Bauer et al. (2006)	Australia	NSD	Domestic ethical funds underperform domestic conventional funds by -1.56% per year. International ethical funds outperform their conventional peers by 3.31% per year. None of these differences are significant.
Bauer et al. (2007)	Canada	NSD	The difference in average alphas is insignificant between the SRI funds and non-SRI funds (-0.21% vs. -0.18% per month)
Barnett & Salomon (2006)	US		When the number of social screens used by an SRI fund increases, the fund's annual return declines at first, but rebounds as the number of screens reaches a maximum.
Renneboog et al. (submitted for publication)	World-wide	UP	Consistent with investors paying a price for ethics, SRI funds in many European and Asia-Pacific countries strongly underperform domestic benchmark portfolios. For instance, the risk-adjusted returns of the average SRI funds in Belgium, France, Ireland, Japan, Norway, Singapore, and Sweden are on average less than -5% per annum. SRI investors are unable to identify the funds that will outperform in the future, whereas they show some fund-selection ability in identifying ethical funds that will perform poorly in the future. Finally, the screening activities of SRI funds have a significant impact on funds' risk-adjusted returns and loadings on risk factors

NSD = Differences between funds are not statistically different

OP = SRI-fund outperformed conventional fund

UP = SRI-fund underperformed conventional fund

Source: Adapted from Renneboog et al. (2008b)

Additional research on SRI fund performance includes a study by Galema et al. (2008), which is not included in the review by Renneboog et al. (2008b) and which points at a positive relationship between (positive) investment screens and fund performance. Galema et al. (2008) find that SRI has a significant impact on stock returns. This is in particular the case for portfolios that score positive on diversity, environment and product.

3.3.3 Regional Differences

Survey reviews of performance differences between SRI and conventional funds note that whether (statistically significant) differences occur, is partly dependent on the geographical region that is studied (Renneboog et al., 2007, 2008b).

United States and United Kingdom

In general, for SRI funds in the US and UK there is little evidence that the (risk-adjusted) returns of SRI funds are different from those of conventional funds. Statman (2000), for example, compares 31 SRI funds with 62 non-ethical funds of similar size. The outcome is measured against both the S&P 500 Index and the Domini 400 Social Index (DSI 400), the most well-known SRI index. The performance measures are different for the two types of funds but these results are not significant. Therefore, it suggests that SRI funds and conventional funds do not differ in performance. Hamilton et al. (1993) reached a similar conclusion 7 years earlier.

Goldreyer & Diltz (1999) researched fund performance in the US of 49 SRI and 20 non-SRI funds between 1981 and 1997. The SRI funds include equity funds, 9 bonds funds and 11 balanced funds. The difference between the two type of funds is again not significant, which leads the authors to conclude that there is no evidence to conclude that SRI funds show a different performance than non-SRI funds. Within the group of SRI funds, it appeared that those selected by positive screening outperform those of other screening methods. Therefore, one may conclude that screening methods influence funds performance.²⁷ This subject will be discussed further in the next section. One evident shortcoming of these findings is that they are based on a relatively small sample of 29 funds.

Bauer et al. (2005) find that in the United States and United Kingdom, one cannot conclude that SRI funds generated higher return. For this they compared the performance of 103 SRI funds with 4,384 non-SRI funds over the period 1990-2001.

Other UK studies also fail to find significant differences between ethical and conventional funds (Gregory et al., 1997; Luther & Matatko, 1994; Luther et al., 1992; Mallin et al., 1995; Renneboog et al., 2007).

Continental Europe and Asia-Pacific

SRI funds in Continental Europe and the Asia-Pacific region show mixed performance results relative to benchmark portfolios.

Renneboog et al. (2008b) find that during the period of January 1991 until December 2003, in Continental Europe and the Asia-Pacific region, the SRI funds underperformed non-SRI funds.

Bauer et al. (2005) analyzed SRI funds in Germany. In Germany it appeared that SRI funds went through a learning phase. In the beginning of the 1990s, SRI funds showed underperformance compared to conventional funds, but caught up and over the period of 1998-2001, both type of

²⁷ Interestingly, the previously mentioned studies that were omitted by Renneboog et al. (2008b) also suggest a positive correlation between positive investment screens and fund performance.

funds generated similar returns. Another outcome of the research was that SRI funds launched before the end of 1997, performed better than SRI funds launched since 1998.²⁸

Kreander et al. (2005) are unable to find statistically significant underperformance or outperformance of SRI funds in Belgium, Germany, The Netherlands, Norway, Sweden, Switzerland and the UK. Schröder (2004) also found no significant difference between ethical funds and a benchmark portfolio.

In Australia, *international* SRI funds outperformed conventional funds, while *domestic* SRI funds underperformed their counterparts (Bauer et al., 2006).

3.3.4 Short Run Versus Medium and Long Run Results

Hill et al. (2007) studied SRI funds in the United States, Europe and Asia. They found different results for funds in the short (3-year), medium (5 year) and long run (10 year) until the year 2005 (this has a statistical origin: the data set is composed of weekly security prices from January 1, 1995 through August 8, 2005). In the medium term, the different measures of performance between SRI and non-SRI funds are not significant for all three regions. In the short run, only Europe's SRI funds outperformed their conventional counterparts and in the long run this is the case for both Europe and the United States. The results for Asia in the long run are almost significant which might be interpreted as Asia catching up with the other two regions.

3.3.5 Multifactor Models

In recent years, a series of authors have focused on the marginal effect of ESG-related variables, thereby trying to disentangle the effect of SRI screens from other portfolio management decisions. This latter wave of studies uses multifactor models, thereby using more sophisticated econometric models in order to incorporate non-quantifiable fund aspects. A detailed discussion of underlying econometric methodologies is beyond the scope of this paper. Of relevance here, is that these studies generally reach a more positive verdict on the question whether SRI funds outperform conventional funds.

The primary advantage of multifactor models is that they control for non-quantifiable aspects such as momentum effects, management skill and mutual fund style (Bauer *et al.*, 2005, p. 1765; Derwall *et al.*, 2005, p. 52; Kempf & Osthoff, 2007, p. 913, 2008; Renneboog *et al.*, 2007, p. 25). Bauer et al. (2007, p. 112) argue that “not using a multifactor model to evaluate ethical funds can lead to an erroneous assessment of mutual fund performance [since without] multifactor models, we cannot separate returns associated with social investment policies from the returns on common investment styles that do not incorporate those policies”.

Derwall et al. (2005), for instance, measure the performance of portfolios that are selected by means of positive screening (based on environmental performance criteria).²⁹ Portfolios comprising shares with a positive sustainability rating outperform a portfolio with companies with low environmental scores by 6% per annum, over the period of 1997-2003. The authors

²⁸ Bollen (2007, p. 685) hints that rational learning could explain the difference in performance between young and mature funds, although his empirical findings do not support this hypothesis.

²⁹ They compare 30 % of US companies with the best CSR ratings with 30 % of companies with the worst CSR ratings, using Innovest ratings.

conclude that financial institutions can improve their profitability by taking into account the environmental information of a portfolio.

Kempf et al. (2007) perform a similar portfolio analysis, comparing 10 % of companies with the best CSR ratings with 10 % of companies with the worst CSR ratings, using a 4-factor financial model and socially responsible ratings from the KLD Research & Analytics. A strategy of buying stocks with high socially responsible ratings and selling stocks with low socially responsible ratings leads to high abnormal returns of up to 8.7% per year. In other words, portfolios with a negative sustainability rating produced a weaker performance than portfolios with a positive sustainability rating, even after taking into account reasonable transaction costs.

Edmans (2010) analyzes the relationship between employee satisfaction and long-run stock returns. He finds that a portfolio of the “100 Best Companies to Work For in America” (companies with a good working environment) exhibits significantly higher returns than the (adjusted) market portfolio.³⁰ This leads him to conclude that the stock market does not fully value intangibles, and that certain SRI screens may improve investment returns.

3.4 SRI Success Drivers

Performance is not the same for all SRI funds and some studies indicate there might be differences between conventional funds and specific SRI funds (see previous paragraph). Possible factors that might influence the profitability of individual SRI funds are the type of investments screens, the deduction of fees before or after the funds return and fund management.

Investment Screens

SRI investors invest in companies that show corporate social responsibility. They select these companies based on investment screens (section 3.1). The type of screens impacts performance of SRI-funds.

Goldreyer & Diltz (1999) conclude that SRI funds with *positive* screening outperform SRI funds that do not use these types of screens, thereby supporting the hypothesis that investments screens affect the performance of SRI funds. However, as discussed previously, these results are based on a small sample. Renneboog et al. (2008a) also conclude that the screening activities have impact on the return: funds adopting a *community involvement policy* (excluding firms that have a poor record of accountability to local community stakeholders) or employing an in-house SRI research team to screen portfolios, have better returns than SRI funds without such process policies.

Barnett & Salomon (2006) find that when the number of social screens increases, the fund’s annual return deteriorates at first, but then improves as the number of screens reaches a ‘maximum’ of 12 (in other words, there is a curvilinear relationship between screening and fund performance). Their advice is for “managers [to] either wholeheartedly commit to broadly screening socially irresponsible firms from their funds, or [to] exclude very few firms such that

³⁰ The portfolio comprising companies with a good working environment earned an annual alpha of 3.5% from 1984-2009, and 2.1% above industry benchmarks.

they do not interfere with their ability to diversify” (Barnett & Salomon, 2006, p. 1119). Furthermore, they suggest that the type of social screens has influence on the financial performance: *community relations screening* gives higher performance, while *environmental* and *labor relations screening* (excluding firms with a record of poor environmental performance and poor labor relations practices, respectively) result in lower performance.

Heinkel et al. (2009) conclude that if fund managers adopt *negative* screens, polluting firms are present in fewer investment portfolios, which reduces risk-sharing opportunities among investors.

Fees and Fund Management

Gil-Bazo et al. (2010) analysed a sample of SRI funds over the period of 1997-2005 and investigated two aspects potentially influencing the performance of SRI funds:

- fund management: the impact of fund management companies has not been investigated very broadly. It might be the case that funds that are managed by companies that are specialized in managing SRI funds, generate higher performance than general companies;
- fees: in previous research the difference in performance between SRI funds and non-SRI funds was attributed to the differences in SRI funds’ ability to generate risk-adjusted returns. However, this may have also been caused by differences in fees.³¹

In their panel data of US equity funds (1997-2005) they find that fund management had a significant impact on fund performance. By comparing SRI funds from specialized management companies with general companies, Gil-Bazo et al. (2010) show that funds of specialized companies outperform the general companies funds: specialized companies funds outperform conventional funds by more than 2.6% per year, while general SRI companies underperform conventional funds.

They also conclude that investors in SRI funds earn a premium in terms of higher risk-adjusted performance, compared to conventional funds. This is the case both before and after fees are deducted from funds return (fees do not play a (statistically significant) role in influencing SRI fund performance). Furthermore, there is no evidence that SRI funds charge higher fees.

Other authors that investigated the effect of fees on the performance of SRI funds are Bauer et al. (2005) and Renneboog et al. (2008a). Bauer et al. (2005) show that the difference in performance between return *after fees are subtracted* and return *before fees are subtracted* does not matter for the difference in performance, if any, between SRI and conventional funds. Hence, they reach the same conclusion as Gil-Bazo et al. (2010) in the sense that fees do not (significantly) influence fund performance, although they do conclude that SRI funds in the United States and United Kingdom charge higher management fees than their counterparts.

Renneboog et al. (2008a) show that fund management fees decrease the risk-adjusted return of both SRI and non-SRI funds. According to their comparison between SRI and conventional

³¹ *Management fees* are used to cover operating expenses including managerial compensation as well as part of the marketing expenses (called the 12B1 fee in the US), while *load fees* include front-end fees (share subscription fees) and back-end fees (share redemption fees) and are mainly used to pay for trading costs (Renneboog et al., 2008a).

funds, differences in management fees are one of the reasons for underperformance compared to conventional portfolios.

3.5 Conclusion

Socially Responsible Investment (SRI) concerns sustainability at the investment, fund or portfolio level and involves screening the sustainability of companies before investing in them. From a finance perspective, there are principally three reasons why investors incorporate sustainability information in their investment decisions: because they hope to improve financial performance, because they want to comply to legislation or voluntary standards, and because it provides more information about a company.

Empirical research on the economic rationale for socially responsible investment generally focuses on the question whether SRI funds provide better returns than conventional funds. Mutual fund studies discussed in this chapter do not offer an unequivocal answer. In general, these studies conclude that SRI funds do not perform better or worse than conventional funds as most research offers statistically insignificant results. This supports the hypothesis that investing in SRI funds enhances sustainability without necessarily negatively affecting the return on investments. This conclusion is strengthened when focusing on mutual fund studies that are based on multifactor models. These studies use more sophisticated econometric models to incorporate non-quantifiable aspects and indicate that portfolios selected based on 'environmental, social and governance'-related variables even outperform portfolios that score low on these variables.

In conclusion, although they do not provide unambiguous evidence of outperformance, empirical results *do* indicate that sustainable investments at least perform as well as conventional investments.

References

- Akkermans, D., Van Ees, H., Hermes, N., Hooghiemstra, R., Van der Laan, G., Postma, T., et al. (2007). Corporate Governance in the Netherlands: an overview of the application of the Tabaksblat Code in 2004. *Corporate Governance: An International Review*, 15(6), 1106-1118.
- Amalric, F. (2005). *The Equator Principles: A Step Towards Sustainability*. Zurich: University of Zurich.
- Andrew, J. (2008). *Responsible Financing?: The Equator Principles and Bank Disclosures*. Wollongong: University of Wollongong.
- Annandale, D., Bailey, J., Ouano, E., Evans, W., & King, P. (2001). The potential role of strategic environmental assessment in the activities of multi-lateral development banks. *Environmental Impact Assessment Review*, 21(5), 407-429.
- Aras, G., & Crowther, D. (2009). Corporate sustainability reporting: a study in disingenuity? *Journal of business ethics*, 87, 279-288.
- Barnett, M. L. (2005). Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Academy of Management Review*.
- Barnett, M. L., & Salomon, R. M. (2006). Beyond dichotomy: the curvilinear relationship between social responsibility and financial performance. *Strategic Management Journal*, 27(11), 1101-1122.
- Bauer, R., Derwall, J., & Otten, R. (2007). The ethical mutual fund performance debate: New evidence from Canada. *Journal of Business Ethics*, 70(2), 111-124.
- Bauer, R., Guenster, N., & Otten, R. (2004). Empirical evidence on corporate governance in Europe: The effect on stock returns, firm value and performance. *Journal of Asset Management*, 5(2), 91-104.
- Bauer, R., Koedijk, K., & Otten, R. (2005). International evidence on ethical mutual fund performance and investment style. *Journal of Banking & Finance*, 29(7), 1751-1767.
- Bauer, R., Otten, R., & Rad, A. T. (2006). Ethical investing in Australia: Is there a financial penalty? *Pacific-Basin Finance Journal*, 14(1), 33-48.
- Bello, Z. Y. (2005). Socially responsible investing and portfolio diversification. *Journal of Financial Research*, 28(1), 41-57.

- Benson, K., Brailsford, T., & Humphrey, J. (2006). Do Socially Responsible Fund Managers Really Invest Differently? *Journal of Business Ethics*, 65(4), 337-357.
- Benson, K., & Humphrey, J. (2008). Socially responsible investment funds: Investor reaction to current and past returns. *Journal of Banking & Finance*, 32(9), 1850-1859.
- Biermans, M., Grand, H. I., Kerste, M., & Weda, J. (2009). *De kapitaalmarkt voor duurzame projecten: De regels van het spel zijn hetzelfde maar het spel verloopt anders*. Amsterdam: SEO Economisch Onderzoek.
- Bollen, N. P. B. (2007). Mutual Fund Attributes and Investor Behavior. *Journal of Financial and Quantitative Analysis*, 42(03), 683-708.
- Chatterji, A., & Levine, D. (2005). Breaking down the wall of codes: evaluating non-financial performance measurement.
- Cochran, P. L., & Wood, R. A. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal*, 27(1), 42-56.
- Coulson, A. B. (2009). How should banks govern the environment? Challenging the construction of action versus veto. *Business Strategy and the Environment*, 18(3), 149-161.
- Cremers, K. J. M., & Nair, V. B. (2005). Governance mechanisms and equity prices. *The Journal of Finance*, 60(6), 2859-2894.
- Creyer, E. H., & Ross, W. T. (1996). The impact of corporate behavior on perceived product value. *Marketing Letters*, 7(2), 173-185.
- Crowther, D. (2000). *Social and environmental accounting*. London, New York, Tokyo: Financial Times Prentice Hall.
- Dasgupta, S., Laplante, B., Wang, H., & Wheeler, D. (2002). Confronting the environmental Kuznets curve. *Journal of Economic Perspectives*, 147-168.
- Derwall, J., Guenster, N., Bauer, R., & Koedijk, K. (2005). The eco-efficiency premium puzzle. *Financial Analysts Journal*, 61(2), 51-63.
- Dowell, G., Hart, S., & Yeung, B. (2000). Do corporate global environmental standards create or destroy market value? *Management Science*, 46(8), 1059-1074.
- Du, S., Bhattacharya, C. B., & Sen, S. (2007). Reaping relational rewards from corporate social responsibility: The role of competitive positioning. *International Journal of Research in Marketing*, 24(3), 224-241.

- Edmans, A. (2010). Does the stock market fully value intangibles? Employee satisfaction and equity prices. University of Pennsylvania.
- Epstein, E. M. (1989). Business ethics, corporate good citizenship and the corporate social policy process: A view from the United States. *Journal of Business Ethics*, 8(8), 583-595.
- Eurosif. (2008). *European SRI Study 2008*. Paris: Eurosif.
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of finance*, 25(2), 383-417.
- Fama, E. F. (1991). Efficient capital markets: II. *Journal of finance*, 1575-1617.
- Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds* 1. *Journal of financial economics*, 33(1), 3-56.
- Fombrun, C. J., Gardberg, N. A., & Barnett, M. L. (2000). Opportunity platforms and safety nets: Corporate citizenship and reputational risk. *Business and Society Review*, 105(1), 85-106.
- Fombrun, C. J., & Shanley, M. (1990). What's in a name? Reputation building and corporate strategy. *Academy of management Journal*, 33(2), 233-258.
- Friedman, M. (1970). The social responsibility of business is to increase its profits. *New York Times Magazine*, pp. 32-33.
- Galema, R., Plantinga, A., & Scholtens, B. (2008). The stocks at stake: Return and risk in socially responsible investment. *Journal of Banking & Finance*, 32(12), 2646-2654.
- Geczy, C., Stambaugh, R. F., & Levin, D. (2005). Investing in socially responsible mutual funds.
- Gil-Bazo, J., Ruiz-Verdú, P., & Santos, A. (2010). The Performance of Socially Responsible Mutual Funds: The Role of Fees and Management Companies. *Journal of Business Ethics*, 94(2), 243-263.
- Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis. *Strategic Management Journal*, 30(4), 425-445.
- Goergen, M., & Renneboog, L. (2002). The social responsibility of major shareholders. Sheffield University.
- Goldreyer, E. F., & Diltz, J. D. (1999). The performance of socially responsible mutual funds: incorporating sociopolitical information in portfolio selection. *Managerial Finance*, 25(1), 23-36.

- Gompers, P., Ishii, J., & Metrick, A. (2003). Corporate governance and equity prices*. *Quarterly Journal of Economics*, 118(1), 107-155.
- Greening, D. W., & Turban, D. B. (2000). Corporate social performance as a competitive advantage in attracting a quality workforce. *Business & Society*, 39(3), 254.
- Gregory, A., Matatko, J., & Luther, R. (1997). Ethical unit trust financial performance: small company effects and fund size effects. *Journal of Business Finance & Accounting*, 24(5), 705-725.
- Guenster, N., Bauer, R., Derwall, J., & Koedijk, K. (2010). The Economic Value of Corporate Eco-Efficiency. *European Financial Management*, 1-26.
- Gupta, S., & Goldar, B. (2005). Do stock markets penalize environment-unfriendly behaviour? Evidence from India. *Ecological Economics*, 52(1), 81-95.
- Halkos, G., & Sepetis, A. (2007). Can capital markets respond to environmental policy of firms? Evidence from Greece. *Ecological Economics*, 63(2-3), 578-587.
- Hamilton, J. (1995). Pollution as news: Media and stock market reactions to the Toxics Release Inventory data. *Journal of Environmental Economics and Management*, 28(1), 98-113.
- Hamilton, S., Jo, H., & Statman, M. (1993). Doing well while doing good? The investment performance of socially responsible mutual funds. *Financial Analysts Journal*, 49(6), 62-66.
- Hansen, R. C. (2006). *The Impact of the Equator Principles on Lender Liability: Risks of Responsible Lending*. London: London School of Economics and Political Science.
- Harold, J., Spitzer, J., & Emerson, J. (2007). *Blended Value Investing: Integrating Environmental Risks And Opportunities Into Securities Valuation*. Oxford: Saïd Business School.
- Heinkel, R., Kraus, A., & Zechner, J. (2009). The effect of green investment on corporate behavior. *Journal of financial and quantitative analysis*, 36(04), 431-449.
- Hill, R. P., Ainscough, T., Shank, T., & Manullang, D. (2007). Corporate social responsibility and socially responsible investing: A global perspective. *Journal of Business Ethics*, 70(2), 165-174.
- Hillman, A. J., & Keim, G. D. (2001). Shareholder value, stakeholder management, and social issues: what's the bottom line? *Strategic Management Journal*, 22(2), 125-139.
- Hoepner, A. G. F., & McMillan, D. G. (2009). *Research on 'Responsible Investment': An Influential Literature Analysis Comprising a Rating, Characterisation, Categorisation and Investigation*. St. Andrews: University of St. Andrews.

- Hong, H., & Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics*, 93(1), 15-36.
- Jensen, M. C. (2002). Value maximization, Stakeholder Theory, and the Corporate Objective Function. *Business Ethics Quarterly*, 12, 235-256.
- Kempf, A., & Osthoff, P. (2007). The effect of socially responsible investing on portfolio performance. *European Financial Management*, 13(5), 908-922.
- Kempf, A., & Osthoff, P. (2008). SRI Funds: Nomen est Omen. *Journal of Business Finance & Accounting*, 35(9-10), 1276-1294.
- Kim, R., & Van Dam, E. (2003). *The added value of corporate social responsibility*. Leeuwarden: Netherlands Initiative for Sustainable Development (NIDO).
- Klassen, R. D., & McLaughlin, C. P. (1996). The impact of environmental management on firm performance. *Management Science*, 42(8), 1199-1214.
- Klein, J., & Dawar, N. (2004). Corporate social responsibility and consumers' attributions and brand evaluations in a product-harm crisis. *International Journal of research in Marketing*, 21(3), 203-217.
- Kolk, A., van der Veen, M., Pinkse, J., & Fortanier, F. (2005). *KPMG International Survey of Corporate Responsibility Reporting 2005*. Amsterdam: University of Amsterdam/KPMG Global Sustainability Services.
- Konar, S., & Cohen, M. A. (2001). Does the market value environmental performance? *Review of Economics and Statistics*, 83(2), 281-289.
- Kreander, N., Gray, G., Power, D. M., & Sinclair, C. D. (2005). Evaluating the performance of Ethical and Non-SRI funds: a matched pair analysis. *Journal of Business, Finance and Accounting*, 32(7), 1465-1493.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2002). Investor protection and corporate valuation. *The journal of finance*, 57(3).
- Luther, R. G., & Matatko, J. (1994). The performance of ethical unit trusts: choosing an appropriate benchmark. *The British Accounting Review*, 26(1), 77-89.
- Luther, R. G., Matatko, J., & Corner, D. C. (1992). The Investment Performance of UK "Ethical" Unit Trusts.
- Lydenberg, G. (2008). *Innovations in social and environmental disclosure outside the United States*. New York.

- Mallin, C. A., Saadouni, B., & Briston, R. J. (1995). The financial performance of ethical investment funds. *Journal of Business Finance & Accounting*, 22(4), 483-496.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of management review*, 22(4), 853-886.
- Mulder, I. (2007). *Biodiversity, the Next Challenge for Financial Institutions: A scoping study to assess exposure of financial institutions to biodiversity business risks and identifying options for business opportunities*. Gland, Switzerland: The World Conservation Union (IUCN), Alterra, FSD.
- Nakao, Y., Amano, A., Matsumura, K., Genba, K., & Nakano, M. (2007). Relationship between environmental performance and financial performance: an empirical analysis of Japanese corporations. *Business Strategy and the Environment*, 16(2), 106-118.
- Nilsson, J., & Nilsson, Å. (2010). *Global Reporting Initiative: Hallbarhetsredovisningens externa transparens i statliga företag*. Lulea: Lulea tekniska universitet.
- Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, 24(3), 403.
- Papadopoulos, T. (2009). *The 'Greening' of Project Finance: Is This a Viable Project?* : Icfai University.
- Pelozo, J., & Shang, J. (2010). How can corporate social responsibility activities create value for stakeholders? A systematic review. *Journal of the Academy of Marketing Science*, 1-19.
- Plinke, E. (2008). *Sustainability and share performance – a long-running debate revisited*. Basel: Bank Sarasin & Co. Ltd.
- Reichelt, H. (2010). Green bonds: a model to mobilise private capital to fund climate change mitigation and adaptation projects. In *The EuroMoney Environmental Finance Handbook 2010* (pp. 1-7): WestLB.
- Renneboog, L., Ter Horst, J., & Zhang, C. (2007). Socially responsible investments: Methodology, risk exposure and performance. *Discussion Paper*.
- Renneboog, L., Ter Horst, J., & Zhang, C. (2008a). The price of ethics and stakeholder governance: The performance of socially responsible mutual funds. *Journal of Corporate Finance*, 14(3), 302-322.
- Renneboog, L., Ter Horst, J., & Zhang, C. (2008b). Socially responsible investments: Institutional aspects, performance, and investor behavior. *Journal of Banking & Finance*, 32(9), 1723-1742.

- Richardson, B. (2007). *Financing Sustainability: The New Transnational Governance of Socially Responsible Investment*. New York: Oxford University Press.
- Scholten, B., & Dam, L. (2007). Banking on the Equator. Are Banks that Adopted the Equator Principles Different from Non-Adopters? *World Development*, 35(8), 1307-1328.
- Schröder, M. (2004). The performance of socially responsible investments: investment funds and indices. *Financial Markets and Portfolio Management*, 18(2), 122-142.
- 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*, 31(8), 33-46.
- Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. Chicago, IL: The University of Chicago Press.
- Soppe, A. (2004). Sustainable corporate finance. *Journal of Business Ethics*, 53(1), 213-224.
- Spicer, B. H. (1978). Investors, corporate social performance and information disclosure: An empirical study. *Accounting Review*, 94-111.
- Statman, M. (2000). Socially Responsible Mutual Funds. *Financial Analysts Journal*, 56(3), 30-39.
- Statman, M., & Glushkov, D. (2008). The wages of social responsibility. Unpublished Working Paper. Santa Clara University.
- Steger, U. (2004). What is the business case for corporate sustainability, *IMD Perspectives for Managers* (pp. 2-4).
- Tirole. (2001). Corporate governance. *Econometrica*, 69, 1-35.
- Turban, D. B., & Greening, D. W. (1997). Corporate social performance and organizational attractiveness to prospective employees. *Academy of Management Journal*, 40(3), 658-672.
- UNEP. (2006). *Show Me The Money: Linking Environmental, Social and Governance Issues to Company Value*. Geneva: UNEP Finance Initiative.
- United Nations Conference on Environment and Development. (1992). *Rio Declaration on Environment and Development*. Paper presented at the United Nations Conference on Environment and Development.
- Utting, P. (2004). Corporate Social Responsibility and Business Regulation. *UNRISD Research and Policy Brief*, 1.

- van Dijken, F. (2007). Corporate social responsibility: market regulation and the evidence. *Managerial Law*, 49(4), 141-184.
- Waddock, S. A., & Graves, S. B. (1997). The corporate social performance-financial performance link. *Strategic Management Journal*, 18(4), 303-319.
- Weber, O., Scholz, R. W., & Michalik, G. (2010). Incorporating sustainability criteria into credit risk management. *Business Strategy and the Environment*, 19(1), 39-50.
- Willis, A. (2003). The role of the Global Reporting Initiative's Sustainability Reporting Guidelines in the social screening of investments. *Journal of Business Ethics*, 43(3), 233-237.
- World Commission on Environment and Development. (1987). *Our common future*.
- Wright, C., & Rwabizambuga, A. (2006). Institutional Pressures, Corporate Reputation, and Voluntary Codes of Conduct: An Examination of the Equator Principles. *Business and Society Review*, 111(1), 89-117.
- WWF. (2006). *Shaping the future of sustainable financing: Moving from paper promises to performance*. Surrey: WWF-UK.

Appendix A Tables and Figures

Appendix A.1 Socially Responsible Investment

Table 3 SRI fund performance: a research overview

Study	Content	Conclusion
Edmans, A.: Does the Stock Market Fully Value Intangibles? Employee Satisfaction and Equity Prices; University of Pennsylvania - The Wharton School; 2008	Portfolio analysis ("100 Best Companies to Work for" vs. market; correction of sector distortions) with a 4-factor financial model Sustainability ratings: limited to quality of the workplace Approx. 100 US companies; timeframe 1984-2006	Significantly higher return from the portfolio comprising companies with a good working environment versus the (adjusted) market portfolio
Kempf, A.; Osthoff, P.: The Effect of Socially Responsible Investing on Portfolio Performance, European Financial Management 13 (5), 908-920, 2007	Portfolio analysis (10% of companies with the best CSR ratings versus 10% of companies with the worst CSR ratings; correction of sector distortions) with a 4-factor financial model Sustainability ratings of KLD (limited thematic spectrum) 700 – 3000 US companies; variable over the period 1992-2004	No reduction in the performance of the portfolio with a positive sustainability rating; portfolio with a negative sustainability rating produced a weaker performance
Bauer, R., J. Derwall, and R. Otten: The Ethical Mutual Fund Performance Debate: New Evidence from Canada, Journal of Business Ethics 70, 111-124, 2007	Portfolio analysis of 8 sustainability funds (compared with the market or benchmark) with a 4-factor financial model Sustainability ratings: different (depending on funds) 8 Canadian funds with global components; timeframe 1994-2003	No difference in the performance of sustainability funds and the benchmark/market
Guenster, N., J. Derwall, R. Bauer, and K. Koedijk: The Economic Value of Corporate Eco-Efficiency, RSM Erasmus University Rotterdam, 2006.	Econometric analysis of the link between sustainability ratings and enterprise value ("Tobin Q") (at company level) Sustainability ratings: limited to environmental protection, in accordance with Innovest 150 – 410 US companies, variable over the period 1996-2002	No reduction in the performance of companies with a positive sustainability rating; companies with a negative sustainability rating gave a weaker performance
Derwall, D.; Guenster, N.; Bauer, R.; Koedijk, K.: The Eco-Efficiency Premium Puzzle; Financial Analysts Journal; Vol. 61; No. 2; 2005	Portfolio analysis (30% of companies with the best CSR ratings versus 30% of companies with the worst CSR ratings), different financial models (incl. correction of sector distortions) Sustainability ratings: limited to the environment (Innovest) 180 – 450 US companies; time frame 1995 – 2003	Substantially higher average return on the portfolio comprising shares with a positive sustainability rating versus portfolios comprising stocks with a negative sustainability rating
Schröder, M.: Is there a Difference? The Performance Characteristics of SRI Equity Indexes; , Journal of Business Finance and Accounting 34 (1) & (2), 331-348; 2007	Portfolio analysis of 29 sustainability indexes (comparison with market or benchmark) with 1-factor and 3-factor financial models Sustainability ratings: different (no use of rating, but ready-made indexes) 29 indexes with global components; timeframe: from inception up to y/e 2003	No difference in the performance of sustainability indexes, and the benchmark/market

Source: Adapted from Plinke (2008, p. 14)

Table 4 SRI screens

Screens	Definitions	Type
Tobacco	Avoid manufacturers of tobacco products	–
Alcohol	Avoid firms that produce, market, or otherwise promote the consumption of alcoholic beverages	–
Gambling	Avoid casinos and suppliers of gambling equipment	–
Defense/weapons	Avoid firms producing weapons for domestic or foreign militaries, or firearms for personal use	–
Nuclear power	Avoid manufacturers of nuclear reactors or related equipment and companies that operate nuclear power plants	–
Irresponsible foreign operations	Avoid firms with investments in government-controlled or private firms located in oppressive regimes such as Burma or China, or firms which mistreat the indigenous peoples of developing countries	–
Pornography/adult entertainment	Avoid publishers of pornographic magazines; production studios that produce offensive video and audio tapes; companies that are major sponsors of graphic sex and violence on television	–
Abortion/birth control	Avoid providers of abortion; manufacturers of abortion drugs and birth control products; insurance companies that pay for elective abortions (where not mandated by law); companies that provide financial support to Planned Parenthood	–
Labor relations and workplace conditions	Seek firms with strong union relationships, employee empowerment, and/or employee profit sharing Avoid firms exploiting their workforce and sweatshops	+ –
Environment	Seek firms with proactive involvement in recycling, waste reduction, and environmental cleanup Avoid firms producing toxic products, and contributing to global warming	+ –
Corporate governance	Seek companies demonstrating “best practices” related to board independence and elections, auditor independence, executive compensation, expensing of options, voting rights and/or other governance issues Avoid firms with antitrust violations, consumer fraud, and marketing scandals	+ –
Business practice	Seek companies committed to sustainability through investments in R&D, quality assurance, product safety	+
Employment diversity	Seek firms pursuing an active policy related to the employment of minorities, women, gays/lesbians, and/ or disabled persons who ought to be represented amongst senior management	+
Human rights	Seek firms promoting human rights standards Avoid firms which are complicit in human rights violations	+ –
Animal testing	Seek firms promoting the respectful treatment of animals Avoid firms with animal testing and firms producing hunting/trapping equipment or using animals in end products	+ –
Renewable energy	Seek firms producing power derived from renewable energy sources	+
Biotechnology	Seek firms that support sustainable agriculture, biodiversity, local farmers, and industrial applications of biotechnology Avoid firms involved in the promotion or development of genetic engineering for agricultural applications	+ –
Community involvement	Seek firms with proactive investments in the local community by sponsoring charitable donations, employee volunteerism, and/or housing and educational programs	+
Shareholder activism	The SRI funds that attempt to influence company actions through direct dialogue with management and/ or voting at Annual General Meetings	+
Non-married	Avoid insurance companies that give coverage to non-married couples	–
Healthcare/pharmaceuticals	Avoid healthcare industries (used by funds targeting the “Christian Scientist” religious group)	–
Interest-based financial institutions	Avoid financial institutions that derive a significant portion of their income from interest earnings (on loans or fixed income securities). (Used by funds managed according to Islamic principles)	–
Pork producers	Avoid companies that derive a significant portion of their income from the manufacturing or marketing of pork products. (Used by funds managed according to Islamic principles)	–

Source: Adapted from Renneboog et al. (2008b, p. 1729)

Appendix A.2 Sustainability Reporting

Table 5 Regulatory SRI initiatives taken by national government in western countries³²

Country	SRI related regulations
Australia	<ul style="list-style-type: none"> In a 2001 bill it is stated that all investment firms' product disclosure statements should include a description of "the extent to which labor standards or environmental, social or ethical considerations are taken into account". Since 2001, all listed companies on the Australian Stock Exchange are required to make an annual social responsibility report.
Belgium	<ul style="list-style-type: none"> In 2001, Belgium passed the 'Vandebroucke' law, which requires pension funds to report the degree to which their investments take into account social, ethical and environmental aspects.
France	<ul style="list-style-type: none"> In May 2001, the legislation "New Economic Regulations" came into force requiring listed companies to publish social and environmental information in their annual reports. Since February 2001 managers of the Employee Savings Plans are required to consider social, environmental or ethical considerations when buying and selling shares.
Germany	<ul style="list-style-type: none"> Since 1991, the Renewable Energy Act gives a tax advantage to closed-end funds to invest in wind energy. Since January 2002, certified private pension schemes and occupational pension schemes 'must inform the members in writing, whether and in what form ethical, social, or ecological aspects are taken into consideration when investing the paid-in contributions'.
Italy	<ul style="list-style-type: none"> Since September 2004 pension funds are required to disclose non-financial factors (including social, environmental and ethical factors) influencing their investment decisions.
Netherlands	<ul style="list-style-type: none"> In 1995, the Dutch Tax Office introduced a 'Green Savings and Investment Plan', which applies a tax deduction for green investments, such as wind and solar energy, and organic farming.
Sweden	<ul style="list-style-type: none"> Since January 2002, Swedish national pension funds are obliged to incorporate environmental and ethical aspects in their investment policies.
UK	<ul style="list-style-type: none"> In July 2000, the Amendment to 1995 Pensions Act came into force, requiring trustees of occupational pension funds in the UK to disclose in the Statement of Investment Principles "the extent (if at all) to which social, environmental and ethical considerations are taken into account in the selection, retention and realization of investments". The Trustee Act 2000 came into force in February 2001. Charity trustees must ensure that investments are suitable to a charity's stated aims, including applying ethical considerations to investments. In 2002, The Cabinet Office in the UK published the Review of Charity Law in 2002, which proposed that all charities with an annual income of over £1 m should report on the extent to which social, environmental and ethical issues are taken into account in their investment policy. The Home Office accepted these recommendations in 2003. The Association of British Insurers (ABI) published a disclosure guideline in 2001, asking listed companies to report on material social, environmental and ethical risks relevant to their business activities.
US	<ul style="list-style-type: none"> Section 406 of the Sarbanes-Oxley Act, which came into effect in July 2002, requires companies to disclose a written code of ethics adopted by their CEO, chief financial officer and chief accountant.

Source: Adapted from Renneboog et al. (2007, pp. 5-6; 2008b, p. 1727)

³² For an overview of the mandatory environmental and social disclosure in countries not mentioned in Table 5, see the research by the Social Investment Forum (Lydenberg, 2008). This paper provides models for similar regulatory action by agencies or stock exchanges in the United States to promote transparency and efficiency.

Box 4 Collevocchio Declaration

In 2002 a group of non-governmental organizations (NGOs) joined forces to promote sustainable finance in the banking sector. Ultimately this group evolved into BankTrack which laid out its vision in the *Collevocchio Declaration Commitments*.³³ This declaration was endorsed by more than 200 organizations in January 2003 and contains 6 commitments for the banking sector (Papadopoulos, 2009; WWF, 2006):

- Commitments to **sustainability**: financial institutions should shift their mission from profit-maximization towards social and environmental sustainable projects. They should fully integrate the consideration of ecological limits, social equity and economic justice into corporate strategies and core business areas;
- Commitments to do **no harm**: institutions should prevent and minimize the environmental and/or social detrimental impacts of their financed projects and operations;
- Commitment to **responsibility**: financial institutions should bear full responsibility for the environmental and social impacts of their financed projects. Furthermore, they should also pay a fair share of the risks they accept and create. This involve both financial risks as well as social and environmental costs that are borne by communities;
- Commitment to **accountability**: institutions should be accountable to their stakeholders, especially those that are affected by the financed projects. Stakeholders should have a influential voice in financial decisions that affect the quality of their environment;
- Commitments to **transparency**: financial institutions should be responsive to stakeholder needs for specialized information on the policies, procedures and transactions of the institutions;
- Commitment to **sustainable markets and governance**: institutions should ensure that markets are more capable of fostering sustainability by actively supporting public policy, regulatory and/or market mechanisms which facilitate sustainability and that foster the full cost accounting of social and environmental externalities.

The WWF-UK and BankTrack evaluate how banks are responding. They review the environmental and social policies adopted by key institutions in the banking sector. This also includes a review of the endorsement of the EPs by banks around the world. These reviews are published in reports of the WWF (WWF, 2006) and BankTrack.³⁴

The Collevocchio Declaration was criticized because it would not take into account the special nature and requirements of the financial and banking sector in the financing of construction high-costs projects (Papadopoulos, 2009). The declaration has little buy-in from the financial sector; it is mostly endorsed by NGOs, very few endorsements have come from financial institutions (Richardson, 2007).

Table 6 Voluntary Codes of Conduct Relevant to SRI³⁵

Code of Conduct	Principal Sponsor
CERES Principles	Coalition for Environmentally Responsible Economies
Collevocchio Declaration	Coalition of Non-Governmental Organizations
Global Sullivan Principles	Reverend Leon Sullivan
London Principles of Sustainable Finance	UK Department of Environment and Corporation of London
UN Global Compact	United Nations
UN Principles of Responsible Investment (UNPRI)	UN Environment Program Finance Initiative (UNEPFI)
UN Statement by Financial Institutions on the Environment and Sustainable Development	UN Environment Program Finance Initiative (UNEPFI)
UN Norms on the Responsibilities of Transnational Corporations	UN Sub-Commission on Promotion and Protection of Human Rights

Source: Adapted from Richardson (2007, p. 81)

³³ See *Collevocchio Declaration: The role and responsibility of financial institutions* (BankTrack, 2003) for a list of endorsing organizations,

³⁴ The third benchmark study by BankTrack, *Close the Gap*, was published in April 2010. See their [website](#) for other recent publications.

³⁵ See Richardson (2007, pp. 82-88) for an elaboration on these codes of conduct.

