CSR and Mainstream Investing – a New Match?

An analysis of how companies and investors perceive the value of Corporate Social Responsibility (CSR)

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Executive Summary

Based on the underlying assumption that Corporate Social Responsibility (CSR) is valued differently by companies and investors respectively, the thesis empirically analyzes how CSR is valued by the two parties by investigating current trends, as well as the perception of the business case for CSR. From the analysis it is found that companies report on their CSR performance as never before, however it is only few who report systematically using performance indicators. Companies that have a strategic approach to CSR can link their CSR performance to financial performance and long-term shareholder value. It is learned that Socially Responsible Investment (SRI) is a growing phenomenon, yet SRIs only make up a small amount of asset under management. The initial assumption is validated as investor do not integrate Environmental, Social and Governance (ESG) factors into their investment analysis due to several barriers, mainly related to short-termism and lack of proof that it is valuable.

A theoretical analysis shows that companies and investors perceive the value of CSR differently, as companies working strategically with CSR can obtain a competitive advantage and long-term value, which is currently not realized by investors due to a lack of methods to sufficiently include ESG factors in an evaluation of the company. The current ESG methods of investors are identified using Schaltegger’s theory to be a ‘single decision model’ where only financial data is valued, and the ‘dual decision model’ where both financial data and ESG factors are considered. As these models turn out insufficient, an ‘integrated decision model’ is suggested. The new model should pursue a single objective and integrate financial data and ESG factor but should not be based on existing valuation methods.

Analyzing the findings using Novozymes as a case study it is found that in practice each group of investors value ESG data differently. The arising attention towards ESG factors in the mainstream investor community is mostly based on ‘gut feelings’. Mainstream investors have no ideas on concrete methods to overcome barriers, expect from a group named ‘integrative investors’. These investors implicitly integrate ESG factors into a valuation that is very long-term focused, wherein considerable value stems from ESG factors. The investigation shows that a transition is underway in the mainstream investor community, as CSR continuously will increase its importance in the future. Novozymes is thus recommended to continue to provide the investor community with CSR information, as a company working strategically with CSR will be able to extend the benefits of working with sustainability, and at the same time continuously gain economic success.
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1.0 Introduction

When looking at the world today, two issues are paramount: The financial crisis and climate changes. They are both undesirable and have global consequences. Are the two crises related, is natural to ask. Not directly, but they both partly stem from the way we as humans have been thinking: short-termed.

The financial markets collapsed due to the default of a large amount of mortgage loans in the US. Junk bonds had been resold to banks world-wide and when the loans could not be repaid, the magnitude was global. The question is why these high-risk bonds could actually be sold in the first place? Many would say due to the way too prevailing short-termism in the financial markets. In the bull market prior to the spring of 2007, it was hard even for banks not to take on slightly more risk and make money in the short-term. The enjoyment ended disruptively when the market started to shake in the US and the rest is history.¹

Turning to the other unavoidable issue of the dramatic changes in the climate, we have seen that the average temperature on the planet has risen by 0.76°C since 1850. Most of the warming has occurred over the last 50 years and has most likely been caused by human activities. The future seems even more frightening as the global warming may increase as much as 6.4°C within the next century.² In retrospect, it is easy to assert that we should have been aware of the long-term consequences that our human behavior would cause. Nonetheless, we were not. Again we were being short sighted, acting in self-interest.

Can a new way of thinking solve the two problems? We have already seen major changes in the world around us. We see how society pose greater demands to companies in terms of debating responsibility issues of money managing and sustainable operations because, like people in general, companies must take responsibility for their actions. Companies are just larger entities of humans. If we want society and our planet to sustain, companies, including the financial community, will be vital players in order to reach success. And success in this regard will be changing the current development. In brief: Change is needed.

We need a world that to a greater extent considers the long-term consequences of the choices made every day. We have to favor choices that benefit the well-being of the planet and the people living on it, if we want the world to sustain. And that is everybody’s responsibility.

Sometimes the greatest facilitator of change is a crisis.³ Since the world finds itself in a crisis in many aspects, this may be the time to change. The thesis at hand takes a closer look at some of these changes and investigates how companies and investors value corporate social responsibility.

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¹ (Generaldirektoratet for det Indre Marked og Tjenesteydelser December 2007)
³ (de Geus 2002)
Being responsible is obviously valuable to the world in general but what are the views from a company and investor perspective? The scope is narrowed down to look at how investors appreciate companies that are acting socially responsible. We believe that engagement is needed from both parties if a solid change towards long-term sustainability in the world is to be successful.

1.1 Field of Study
Several international bodies, like the United Nations (UN) and World Business Council for Sustainable Development (WBCSD) have recognized the key role companies and investors play in the development of a sustainable world. Much debate focuses on companies running their businesses in a responsible manner, and in the light of the financial crisis much discussion currently exists about how investors or financial practitioners should rethink the fundamentals of company valuation. The majority argues that this ‘rethinking’ should be done by systematically including environmental, social and governance (ESG) parameters when evaluating companies’ overall performance. This debate about rethinking valuation indicates that companies and investors value social responsibility differently.

Our overall puzzlement when reading about the subject has been why this is the case? This wonder was immediately captured in an underlying assumption that companies and investors respectively value social responsibility differently, which means that companies that work proactively with CSR, which positively affects their overall business performance, are not given a superior value by investors. This assumption serves as the foundation for the wish to investigate this very new field of study further. How to obtain a mutual understanding of the value of CSR between companies and investors is a topic that everybody is talking about without really agreeing on a way forward. The problem at hand boils down to why companies struggle with getting their CSR message across to investors and analysts and, oppositely, why investors apparently have difficulty in valuing social responsibility when selecting stocks for investment. Thus there is an emerging need for addressing this problem both empirically, theoretically but indeed also in practice.

Various recently published reports try to concretize the main problem, namely reaping support from both the company and investor communities to focus on ESG factors. Addressing the investors of a case company is our way of striving to obtain a better understanding of why investors value CSR differently than companies. Our approach is to use a company that is working proactively with CSR and where CSR is an important value driver, as an example when we approach investors. Accordingly, the thesis is written in co-operation with Novozymes. The Danish mid-size biotech company was chosen as case company because the company is often referred to as a best case

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4 (World Business Council for Sustainable Development 2009b)
in a Danish context for working proactively with CSR.\(^6\) Instead of investigating companies that are doing little or nothing within the field of CSR, the challenges of a best case company is interesting to investigate as the challenges most likely will become relevant for other companies. This leads us to the research question.

### 1.2 Research Question

**Why is corporate social responsibility (CSR) currently valued differently by companies and investors, and is this reflected in the case of Novozymes and its investors?**

In order to give a comprehensive answer to the research question, we will focus on answering the following four sub-questions. The first two sub-questions are general and the latter two will focus on Novozymes:

1. **How is CSR valued by companies and investors, and what is the business case for social responsibility from a company and investor perspective respectively?**
2. **Why is the value of CSR perceived differently by companies and investors?**
3. **How do Novozymes’ investors value ESG data in a valuation of Novozymes?**
4. **How can Novozymes’ current communication of ESG data to investors possibly be improved to the benefit of both parties?**

The first question serves to investigate if our assumption, that ‘CSR is valued differently by companies and investors’ can be confirmed empirically. The second question seeks to theoretically understand the different perceptions in value, whereas the last two questions serves to investigate if a similar problem exists in the case of Novozymes and their investors.

In the research question and sub-questions the word ‘investors’ refers to both analysts and investors.

### 1.3 Definitions

Below important definitions relevant for understanding the argumentation of the thesis will be presented:

**Corporate Social Responsibility (CSR)** is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis.\(^7\) In this thesis CSR is referring to the way a company is running its business,

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\(^6\) (PA Consultancy Group 2009)
thus in a sustainable and responsible way. Not the company’s products or services are contributing to making the world a better place environmentally and socially.

**Sustainability** is in this thesis specified to relate to both a company’s sustainable products and services, and the sustainable behavior of the company. The first relates to the products and services sold are contributing to a sustainable world, and the second is related to the way the company is running its business.

**Socially Responsible Investments (SRI)** is defined as “a 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”.

Four SRI practices are used when investing socially responsible:

- **Negative screening** entails a stock selection process that excludes given sectors or companies from a fund if involved in certain activities based on specific criteria, such as arms manufacture, publication of pornography, tobacco, animal testing, etc. or if they do not comply with international standards and norms such as issued by OECD, ILO, UN, UNICEF, etc.

- **Positive screening** entails the selection of stocks of companies that perform best against a defined set of ESG criteria. This may include Best-in-Class where the leading companies with regard to ESG criteria from each individual sector or industry group are identified and included in the portfolio.

- **Shareholder activism** is the term for shareholders’ engagement where they seek to facilitate change of political or financial character within the company of social or environmental character. Normally, dialog with the executive management is initiated. If no satisfying results are reached it can lead to the shareholders using their voting rights.

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8 (European Social Investment Forum 2008)
9 (European Social Investment Forum 2008)
10 (European Social Investment Forum 2008)
11 (European Social Investment Forum 2008)
- Divesting refers to the action of selling shares investors hold in the company.  

**Environmental, Social and Governance (ESG) factors** are used to describe the environmental, social and corporate governance issues that companies and investors consider in the context of evaluating corporate behavior. All ESG factors are included in the concept of CSR and can differ across industry sectors and geographies.  

**Institutional investor** is an investor that pools large sums of money and invests professionally on behalf of others. Institutional investors include banks, insurance companies, pension funds, hedge funds and mutual funds, thus private investors are not included.  

**Sell-side analyst** works for a brokerage or firm that manages individual accounts and makes recommendations to the clients of the firm to help them make decisions to buy, sell, or hold stocks.  

**Buy-side analyst** usually works for a pension fund or mutual fund. Their recommendations are made exclusively for the company that employs them. Unlike sell-side recommendations, which are meant for the public, buy-side recommendations are not available to anyone outside the firm.  

**Financial performance** is a term used to describe the financial health of the company as measured in the financial statements of the company. In this thesis, financial performance is concerned only with the performance as stated in the financial statements.  

**Shareholder value** is the sum of all strategic decisions that affect the firm's ability to deliver value to its shareholders. It represents the public consensus of the value of the company’s equity.  

**Strategic CSR** is a concept developed by Porter & Kramer (2006) to describe the type of CSR work that can create competitive advantage for companies, as opposed to the traditional or reactive approach to CSR, which do not result in value generation for the company.  

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12 (European Social Investment Forum 2008)  
13 (World Business Council for Sustainable Development 2009a)  
15 (UNEP FI, WBCSD, Young Managers Team 2004)  
16 (UNEP FI, WBCSD, Young Managers Team 2004)  
19 (Porter, Kramer 2006)
1.4 Structure of the Thesis

The following section gives a brief outline of the thesis, providing an overview of the different parts of the thesis, along with an explanation of the purpose of each section in relation to the thesis in general.

The thesis was initiated by an introduction, which resulted in the research question. Subsequently, the methodology section will provide an outline of the scientific purposes and explanations of the methodological foundation of the thesis, such as the choices made in the decision-making process and their consequences. Then the literature, upon which the research is based, will be reviewed. As the field of study lies within social responsibility, both academic literature about CSR and SRI is reviewed with the purpose of understanding previous research within this field as well as selecting relevant theories for the research question at hand. Next, a brief presentation of the thesis’ theoretical frameworks, ‘Strategic CSR & Competitive Advantage’ by Porter & Kramer (2006) as well as ‘The Relationship between ESG Performance and Economic Success’ by Schaltegger (2006) will be given, in order to present the reader with the theoretical foundation on which the research question will be examined. Additionally, a section about the Danish case company Novozymes, their sustainability profile and internal processes, as well as the set-up of the Sustainability Development center and the Investor Relations department will follow. The section will turn more analytical as Porter & Kramer’s framework from 2006 will be applied in order to argue that Novozymes is working strategically with CSR.

Analysis one will validate or dismiss the underlying assumption as the first sub-question is asking: “How is social responsibility valued in terms of the business case for social responsibility from a company and investor perspective respectively?” A global, empirical study will be undertaken by scrutinizing the newest international and national reports as well as asking experts within the field of study clarifying and explorative questions. The first analysis will thus give a necessary introduction and understanding of a highly complex area of study by first providing a ‘map’ of the complex landscape of initiatives and actors of social responsibility, and second describing the current situation of companies and investors handling CSR which leads to the business case for CSR as seen from the companies’ and investors’ perspective respectively. This will allow us to identify the underlying problem.

In the second analysis the identified problem will be theoretically analyzed. The discrepancy of why CSR is valued differently is addressed by the second sub-question; “Why is social responsibility valued differently by companies and investors respectively?” Applying the first theoretical framework on ‘Strategic CSR & Competitive Advantage’, will allow us to discuss how value-
creating CSR emerges in a company perspective and can be linked to competitive advantage. Thereafter, the second theoretical framework, Schaltegger’s theory on ‘The Relationship between CSR Performance & Economic Success’ will be used to examine how CSR is viewed among investors. This will allow us to identify how investors make investment decisions by deriving two different investment decision models. Subsequently, a discussion follows on whether CSR should be adapted and incorporated into existing financial models or if the financial models should be reconsidered. An argument will be set forward that a new integrated valuation model is needed which incorporates CSR to greater extent. The argument will be further developed by taking contemporary research into consideration, as well as ideas from Mr. Lydenberg and Ms. Louche that were shared in an interview in Copenhagen in May 2009.20

The third analysis is company specific and is the far more practical part of the thesis. Novozymes is used as a case study in investigating the third sub question; “How do Novozymes’ investors value ESG data in a valuation of Novozymes?“ This analysis is solely based on interviews with a number of Novozymes’ analysts and investors. The identified investment decision models from analysis two will be applied to test our theoretical findings on a real case. Having answered the third sub-question the fourth and last sub-question will be addressed, namely “How can Novozymes’ current communication of ESG data to investors possibly be improved to the benefit of both parties?” which will result in concrete recommendations to Novozymes going forward.

Thus, the three analyses will, as a combined entity, answer the overall research question. Following the conclusion, a section that puts the thesis into perspective will be presented.

2.0 Methodology

The following section will describe the methodological aspects of this thesis, namely the research approaches and methods used when answering the research question, and which consequences these choices have had for the results and conclusions reached.

2.1 Research Philosophy

This paragraph will briefly describe the research perspective taken in this thesis or the so-called type of glasses chosen to look at the research phenomenon.

The underlying theory of science in this thesis is based on the ontology of critical realism. This is a thought within social science that argues for the material presence of the social and natural world outside of our knowledge of it and, in turn, an objective reality exists. This truth is what is sought captured by the exercise of critical realistic science. To critical realists, reality is deep and does not only consist of our knowledge and observations of events and phenomena, but also of structures, mechanisms and causal potentials on a deeper level. What is going on at this deeper level causes

20 Appendix 6 - Expert Interview: Steve Lydenberg and Céline Louche
tendencies in the phenomenon, of which we gain knowledge of on the upper, actual or observable level. To illustrate critical realism, the analogy of the iceberg can be used, where only a small part of the entire entity is visible to us. In order to understand what we experience on the actual level, ‘the top of the iceberg’, we have to go ‘under the water’ to deeper structures and relations that are not directly observable. Hence we aim to understand the deeper structures of why the value of CSR seems to be perceived differently by companies and investors, and the underlying societal trends that influence this. Epistemologically, critical realists believe it is impossible to render the truth completely. Nonetheless critical realists believe in rational judgments, so that different allegations can be said to make sense or not, and thus the truth can be approached, but one can never be certain that it has been found. For the same reasons, we cannot reach an overriding truth about why investors and companies value social responsibility differently, but we seek to approach the truth by exploring the field of study in dept.

In critical realism reality is characterized as an open system, meaning that experiments cannot be conducted in a closed system like scientific problems within natural sciences often can. This is due to the characteristics of the problem being within social science where many factors influence the outcome of a study. Due to the fact that inductive and deductive approaches seek to close open systems, in order for them to function, critical realists recommend the retroductive approach as taken in this thesis. The retroductive approach will be described below.

2.2 Research Strategy

The thesis revolves around three analyses, which are rather different in scope. The first analysis can be referred to as the empirical analysis based on existing data and newly achieved input from expert interviews. The second analysis can be characterized as the theoretical analysis due to the fact that it takes on the findings from the first analysis and applies the theoretical frameworks. The third analysis takes the form of a practical real-life case study where the findings from the two previous analyses are tested by conducting interviews with Novozymes’ analysts and investors. The third analysis will result in recommendations. As the three analyses are of different nature, the investigation design will also take on several forms of research strategies namely an explorative study, the grounded theory model, a case study, and a cross sectional study. Using multi-methods does not mean that the methods exclude each other but enables triangulation. Triangulation refers to the use of different data collection methods in order to ensure that the data are telling what we think they are telling us. The four research strategies will briefly be presented in the following.

21 (Nygaard 2005)
22 The term epistemology concerns what constitutes acceptable knowledge in a field of study, (Saunders, M., Lewis, P. and Thornhill, A. 2007)
23 (Nygaard 2005)
24 (Nygaard 2005)
25 (Saunders, M., Lewis, P. and Thornhill, A. 2007)
Firstly, at the outset, we had little knowledge on the subject matter, and our goal was to identify the problem of what seemed to be a mismatch of factoring in CSR related value in a company’s financial valuation from the company and investor perspective respectively. The overall research strategy of the thesis is thus explorative in terms of investigating a relatively new phenomenon and seeks new insight to comprehend if and how investors use and integrate CSR information into their investment decisions. Our explorative study will be undertaken by searching the literature and interviewing experts within the field. The explorative study is very flexible and adaptable to changes, which makes it highly fitted to apply on an area of research where only limited work has previously been made. Using an explorative approach the thesis seeks to understand the problems that investors and companies face as well as give a diagnosis to the problem.

Secondly, as the thesis is based mostly on qualitative research, the underlying methodical approach in this thesis uses some elements of the grounded theory model. In the grounded theory model the researchers begin with an area of study and allow the theory or a set of propositions to emerge from the collected data in order to develop relevant theoretical approaches. The grounded theory model contradicts the traditional model of research, where a theoretical framework is chosen, and then applies the selected model to the studied phenomenon. This means that the grounded theory model is relevant to apply as it allow the topic or problem evidence to accumulate to dictate the emerging theoretical agenda by asking the questions “what is going on?” and “what is the main problem and how is this problem investigated further?” These questions are asked throughout this thesis, as the field of study is relatively new and untested.

Thirdly, the practical and company specific analysis, is based on a single case study of Novozymes. It will be investigated how Novozymes’ investors and analysts value ESG factors and the findings from the first and second analysis will be applied to Novozymes’ investors. As the thesis is based within social science, the use of qualitative research methods such as case studies to examine contemporary situations and topics are helpful. Critics of the case study method believe that the study of a small number of cases can offer no grounds for establishing reliability or generality of findings. Others feel that the intense exposure to study of the case biases the findings. Yet

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26 (Saunders, M., Lewis, P. and Thornhill, A. 2007)
27 (Saunders, M., Lewis, P. and Thornhill, A. 2007)
28 (Andersen 2002)
29 (Corbin 2003)
30 (Saunders, M., Lewis, P. and Thornhill, A. 2007)
researchers continue to use the case study research method. A typical characteristic of case studies is that one examines a matter and the context and seeks answers to why, how and what. These characteristics comply with this thesis, as we aspire to investigate how investors value the central phenomenon by addressing Novozymes’ investors directly through interviews. Thus, even though multiple case studies would have been relevant, the single case study still enables us to draw conclusions on how investors value CSR in general.

Fourthly, the time horizon of the thesis is that of a cross-sectional study or a snapshot study, as the researchers only take a look at the situation right now and not over time.

2.3 Research Approach
The thesis takes on a retroductive approach. The retroductive approach entails three phases. First, the researchers identify the phenomenon that is sought explained, namely how investors and companies perceive the value of CSR. Secondly, the researchers construct and empirically test possible explanations, which is done in terms of investigating how the two parties, companies and investors respectively, see the business case for, and hence why they value CSR differently. Thirdly, two investment decision models currently being applied in practice by analysts and investors are identified, and the explanation, that none of these fully incorporate and integrate CSR information, and thus something new is needed, becomes the basis for further exploration. The retroductive form of reasoning is an approach to the theoretical inquiry that uses theories of another field of study as a method for devising theory. Thus using the retroductive approach does not establish truth, but its purpose is to originate ideas about a phenomenon that can be further developed and tested. This path of reasoning is applied in this thesis as the nature of the field of study is so new and rather unexplored, which enables us to identify theoretical explanations of the identified problem that are used for further exploration in the form of a case study in the practical part of the thesis.

2.4 Empirical data Collection and Criticism
This section will describe the examination design, which is the way the central phenomenon is explored, and the combination of approaches used when gathering, analyzing and interpreting data. For the first two analyses, secondary data as well as some primary data will be used, and the third analysis will uniquely use primary data.

31 (Andersen 2002)
32 (Saunders, M., Lewis, P. and Thornhill, A. 2007)
33 (Marriner-Tomey, Raile Alligood 1989)
34 (Steiner 1978)
Secondary Data
This research project makes use of secondary data in the form of written materials such as academic articles, books, reports and newspaper articles. An issue of collecting secondary data is that its specific purpose might differ from the purpose of this research project. Accordingly we have considered the credibility and the quality of the data. Using secondary data involves risk of measurement bias due to deliberate or intentional distortion of the data. This is especially the case in regards to general website information and newspaper articles. However, due to the fact that the collected secondary material presented in the research project mostly consist of articles from academic journals and reports from institutional bodies that are acknowledged by scholars around the world, they are considered to be valid.

Primary Data
Primary data are achieved through interviews with experts within the field of study and investors and analysts of Novozymes. Due to the recent nature of the investigated subject no standardized method or terminology has been identified yet in how mainstream investors can include ESG factors in company valuations, therefore new findings are likely to be developed through exploratory interviews, testing underlying assumptions and arising thoughts, in accordance with the grounded theory model. For this to happen dialogue is required between the company and its investors and related analysts, which are approached in this thesis.
Likewise, Novozymes has provided primary data to the thesis. During the period where the problem area and research question of the thesis was framed and conceptualized, several informal meetings were held with Novozymes’ employees from various business units; Senior Manager from the Sustainability Development center, VP from the Finance department, and the Senior Director from the Investor Relations department, to reach the most valuable subject of research as possible for all parties. Thus, the Novozymes employees have served as sparring partners. Of course, the company always possesses higher knowledge about itself compared to a third party. Being aware of this risk of an asymmetric information flow, the researchers have sought to hold a critical approach in analyzing the received material in form of internal business documents and presentations as well as the face-to-face interviews with key Novozymes employees.

2.4.1 Interview Design
Two different groups of people have been interviewed for the thesis. For the first analysis, 5 experts within the field of CSR and economic performance have been interviewed in order to explore and support our findings from secondary data. As the interviewees have very different backgrounds, the interview questions have varied, but have generally been loosely structured in

35 (Saunders, M., Lewis, P. and Thornhill, A. 2007)
order to open for discussion of unforeseen subjects.\textsuperscript{36} For the third company specific analysis, 7 investors and 2 analysts of both Danish and international origin have been interviewed. The interviewees or ‘the population sample’\textsuperscript{37} are familiar with the case company and have been selected according to their different investment objectives as well as time horizons. The final sample thus consists of sell-side analysts operating with a short time horizon, buy-side analysts and institutional investors operating with a medium to long-time horizon. This means that the sample constitutes a representative entity of the general perception of CSR in the investor community. The form of the analyst and investor interviews is semi-structured. This form entails that the interviewers commence with a set of interview questions but is prepared to vary the order in which questions are asked and to ask new questions in the context of the research situation. This approach corresponds well with an exploratory study.\textsuperscript{38} Several considerations have been made to develop a methodologically well-controlled design ahead of the interviews due to the highly critical view of CSR as value adding amongst investors. In this context it is vital to be aware of the different nature of investors and analysts. Thus, sell-side or buy-side analysts and investors have been identified prior to each interview. Furthermore, the purpose of semi-structured and unstructured interviews is to generate qualitative data in order to understand participants’ attitude and opinions. Doing this enables the researchers to find out what is happening and seek insight in order to probe answers.\textsuperscript{39} The validity and reliability of the chosen interview techniques will be explained and discussed in the following.

\textbf{2.4.2 Validity and Reliability of Collected Data}

Research ethics are especially vital to take into account when collecting primary data.\textsuperscript{40} Ethical considerations are made as the researchers’ objective and identities are revealed prior to the interviews. In order to obtain valid empirical data the asking techniques are designed to be of a descriptive nature, asking if and how ESG factors are being taken into consideration in a financial valuation. The interview questions develop are explorative as the objective is to investigate a matter which is somewhat unknown, in this case how Novozymes’ current communication of ESG data to investors can be improved to the benefit of both parties. In exploratory interviews there is a risk of asking leading questions as well as a danger of interpreting the answer from the interviewees in a different way than intended. To mitigate the risk of subjective biases, it was ensured that all interviewed investors were asked a number of identical questions and that all interviews were recorded. The semi-structured interviews hence provide a snapshot of how

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\textsuperscript{36} (Saunders, M., Lewis, P. and Thornhill, A. 2007), Appendix 1 – Overview of Interviewed Experts
\textsuperscript{37} (Saunders, M., Lewis, P. and Thornhill, A. 2007)
\textsuperscript{38} (Saunders, M., Lewis, P. and Thornhill, A. 2007)
\textsuperscript{39} (Saunders, M., Lewis, P. and Thornhill, A. 2007),
\textsuperscript{40} (Saunders, M., Lewis, P. and Thornhill, A. 2007)
\end{flushright}
Novozymes’ investors currently consider ESG factors in their investment decisions.\textsuperscript{41} In all the interviews, except from two cases where two company representatives were present, only one person from the company at hand has been interviewed. Due to the intangibleness of the research field this means that even though the person represents a company and therefore answers on behalf of the company that person’s answers and hence perceptions remain somewhat subjective and can possibly slightly divert from the organization as a whole. Due to the relative high ranks of the interviewees as well as their beforehand acceptance of the posed question, we have to presume that their answers in general are in accordance with the company. When investigating Novozymes’ investors’ point of view regarding the integration of ESG factors into valuation it has not been possible to create a 100% accurate picture of the case company’s investors as some contacted analysts and investors have either not agreed to make the interview or have been obliged to decline due to company policy or time restrictions. A minimum of ten interviews with Novozymes’ investors and analysts were estimated to fulfill the validation dimension of the thesis. As mentioned earlier, the result has been 9 interviews in total, which give a response rate of 53% as a total of 17 investors and analysts were contacted. The interview form has been face-to-face in 4 of the cases, whereas the rest have been conducted by phone. We have interviewed 7 investors totally owning at least 6.3% of Novozymes’ B shares.\textsuperscript{42} This is a fairly large amount considering that Novo A/S\textsuperscript{43} holds all A shares and 10.7% of B shares whereas Novozymes holds 6.9%.\textsuperscript{44} This means that the investors addressed in this thesis represent at least 7.6% of the B-shares not held by Novo A/S or Novozymes. In addition, we have conducted interviews with 2 analysts. We find the number of completed interviews to be a representative number, which will allow us to generalize upon findings, and serve as a fundament for making recommendations to Novozymes on behalf of all Novozymes’ shareholders.\textsuperscript{45}

2.5 Delimitations

Companies normally use CSR to target several stakeholders at the same time. In this thesis the scope is limited to exclusively focus on investors’ use of CSR reporting, thus only one single stakeholder is targeted. This focus was decided upon in co-operation with Novozymes as the company also shares the same initial assumption as the researchers, namely that companies and investors value CSR differently.

\textsuperscript{41} See Appendix 8 – Interview Questions for Investors & Analysts, Overview of Interviewed Investor on p. 78, and summaries of investor interviews in appendices 17 to 25.

\textsuperscript{42} As one investor interviewed for this thesis holds 6.3% of the B-shares it can be assumed that the total sample represents more than 6.3%. Novozymes: http://www.novozymes.com/en/MainStructure/Investor/Who+owns+Novozymes/ (15.02.09)

\textsuperscript{43} As one investor interviewed for this thesis holds 6.3% of the B-shares it can be assumed that the total sample represents more than 6.3%. Novozymes: http://www.novozymes.com/en/MainStructure/Investor/Who+owns+Novozymes/ (15.02.09)

\textsuperscript{44} Calculation: 6.3 + 100 / (10.7 + 6.9)

We limit the geographical scope of the thesis to concentrate on companies and investors in the US, Scandinavia, and the rest of Europe. This is done due to the fact that more extensive data is available from these countries. Moreover, the majority of companies reporting on CSR are found in these areas and the majority of SRI investors are located here as well.

We limit the focus of the thesis to concentrate on large companies, and how they work and report on CSR, as the two main surveys we use to investigate how companies value CSR are focused on these. More specifically the focus is on the global fortune 250 companies and the 100 largest companies in 12 countries. In addition, large companies often have more resources allocated to CSR and explicitly report on their efforts, hence more secondary data is available on these companies. Moreover, the case company, Novozymes, is included in this group.

The researchers are aware that what companies believe is good CSR practice is not necessarily the best solution for the surrounding society. However, an underlying assumption in this thesis is that what is presumed socially or environmentally valuable from a company perspective ultimately adds value to the global society. This limitation is based on the fact that the scope of this thesis is to differ between value-creating CSR, and non value-creating CSR, and not on whether a company’s CSR strategy is benefiting the society in the best possible manner.

It is the focus of this thesis to investigate the largest groups of institutional investors, namely the group of mainstream investors only using financials when making investment analysis, and the group of investors that recently has started to consider ESG information when making investment decisions. However, it is necessary to look at the group of investors that are considered to have the most sophisticated methods of including ESG information in their investment decisions that are referred to as SRI investors. Looking at the development of SRIs and the drivers and barriers, will allow us to understand why the other groups of investors, the ones with the largest pool of asset under management, do not apply the similar methods when making investment decisions as SRI investors. Thus, the SRI investors are, as a starting point, seen as a best-in-class example for our investigation. Yet it should be stressed that the goal of the investigation is to target the investors with the largest pool of money under management.

It is not the scope of the thesis to explain the form and the function of a new integrated model. Instead, it is the focus to demonstrate what the fundament could look like of an investment decision.

46 (Mirvis 2009, Bartels 2008)
47 The 12 countries in the survey are: Australia, Brazil, Canada, Czech Republic, Denmark, Finland, France, Hungary, Italy, Japan, Mexico, Norway, Portugal, Romania, South Africa, South Korea, Spain, Sweden, Switzerland, the Netherlands, United Kingdom, United States. However, we only focus on the countries within the geographical scope of the thesis, namely: US, Scandinavia, and the rest of Europe.
model that bridges the gap between the two parties; companies and investors respectively, in terms of their perception of CSR as a value driver.

3.0 Literature Review
By systematically reviewing the literature within this field, a solid understanding and insight into previous research concerning business role in society, CSR’s evolvement, and investors’ use of CSR, termed SRI, have been obtained. The purpose of the literature review is two-stringed; first of all it provides the reader with a brief but solid introduction to a very broad field of study, which at a first glance is very opaque and takes on various aspects and topics that make the task of achieving a simplified overview an ample exercise. Secondly, the review serves as a quality assurance to ensure that the theoretical approaches included in the theoretical framework chapter has been singled out based on a comprehensive examination of the existing literature. The review of the literature has ensured that no crucial research has been overlooked and that the research area of this thesis has been validated in relation to the overall research agenda. How this thesis is positioned according to existing research is clarified in a concluding summary in the end of the section.

3.1 Social Responsibility in a Corporate Perspective
The initial part of the literature review will focus on social responsibility from a company perspective, by providing an overview of the fast evolvement of the concept of CSR.

3.1.1 Business in Society
Grasping the overall context of the company’s macro environment, namely the society, is vital to include in this thesis, as the global society is a major external stakeholder that influences the company’s decision-making and strategy. As society is constantly changing which is reflected in the on-going demands to corporations on how to behave and contribute back to society, the review will lead us to understand the causes of the on-going discussions about corporate social responsibility.

Bowen (1953) was the first to introduce the social responsibility of the firm as a means of anticipating and reducing potential sources of business risk. Early discussions have generally focused on the role of business in society and the nature of a firm’s social responsibilities. When tracking the arising role of business in society in the literature, the term ‘legitimacy’ is often used. Suchman (1995) defines legitimacy as a generalized perception that the actions of an entity, such as a company, are desirable, proper or appropriate within some socially constructed systems of

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48 (Bowen 1953)
49 (Carroll 1999, Pearce II, Doh 2005)
norms, values, beliefs and definitions. Vidavar-Cohen & Brønn (2008) argue that in the business context, legitimacy improves the ability to compete for resources and obtain stakeholder approval. Deephouse & Suchman (2008) elaborate on this stating that legitimacy provides a crucial ‘reservoir of support’ during times of organizational or industry crisis. The loss of reservoir of support can threaten the long-term survival of both organizations and industries. Thus, preserving legitimacy is one of the most important tasks for companies’ existence in the society.

3.1.2 The Development of CSR

CSR has evolved very quickly as a concept. The fast evolution of the concept is one of the reasons why there is so much confusion and different perceptions of the phenomenon. Society is under constant transformation and companies’ behavior change continuously. In the beginning of the era of technological development and globalization, businesses were demanded to adopt a corporate socially responsible position not only within the home country but also worldwide. A direct symptom of how companies change their behavior and agenda, in the pursuit of obtaining legitimacy or license to operate, is the introduction of the term Corporate Social Responsibility, which came into common use in the beginning of the 1970s. As stated by Carroll (1999), CSR is a dynamic phenomenon as it has a diverse history in the literature, which makes it a very broad area of study. Looking at the early academic discussions Friedman’s famous argument from 1970 states that the social responsibility of companies is solely to maximize profits, as “the business of business is business”, consequently there is no role for CSR. After the publication of Friedman’s (1970) thesis, scholars began to develop theoretical rigor around the social responsibilities of the company. In the late 1960s and early 1970s the first wave of CSR responded to strong social, mainly student and NGO driven, movements against capitalism and businesses. This movement triggered a massive public debate about corporations’ social responsibility and the lack of it, which lead to massive media scandals that had immediate and wide-scale consequences for companies involved, such as drop in stock prices and loss of reputation. In the literature the impact of this public awareness and discussion about the business community acting in a responsible manner is often documented by the textbook examples of Shell’s attempt to dump the Brent-Spar oil platform into the sea in 1995, and the revelation of Nike’s use of child labor in sweatshops during the 1990s in Cambodia and Pakistan.

50 (Suchman 1995)  
51 (Vidaver-Cohen, Brønn 2008)  
52 (Deephouse, D.L. and Suchman, M. 2008)  
53 (Vogel 2005)  
54 (Carroll 1999)  
55 (Friedman 1970)  
56 (Vogel 2005)
In the late 1970s, Carroll (1979) offered one of the first conceptualizations of CSR introducing the discretionary responsibility to meet additional behaviors and activities that society finds desirable, for instance philanthropic initiative.\(^{57}\) Much of the early debate on CSR focused especially on corporations’ records of donating a share of their profits to charity, which is usually referred to as corporate philanthropy or citizenship. In this relation the essence of CSR used to be seen in corporations’ philanthropic engagement. In this way companies could climb the social responsibility latter by donating increasing shares of their profits to good causes. Thus, CSR was regarded as an external element to the actual business processes, which is a very common view of the literature from the first CSR wave.\(^{58}\)

Vogel (2005) describes the so-called second wave of CSR, which dates from the late 1990s.\(^{59}\) The second wave of CSR is by many scholars described as a response to businesses’ approach to CSR as a public relations tool also labeled as a non-strategic corporate ‘window dressing’ exercise by Weaver et al. (1999).\(^{60}\) The second wave of the CSR literature embraces many different new topics and perspectives. One of the leading issues of the second wave is regulation and introduction of minimum standards in order to force companies to behave socially and environmentally responsible wherever they operate in the world. The Porter hypothesis by Van der Linde & Porter (1995) investigates the impact and necessity of regulation in terms of triggering a development and introducing higher minimum standards, thus raising the base line.\(^{61}\) The Porter hypothesis focuses on the environmental perspective and argues that stricter environmental policy or regulation does not necessarily imply losses in competitiveness. The hypothesis is supported by a number of cases where it seems as if tighter environmental regulations have reduced overall costs for the firms, and/or improved the quality of their products. Short after, a work by Palmer et al. (1995) argues strongly against the argument put forward by Van der Linde & Porter. Palmer et al. (1995) argue that firms can undertake the improvements voluntarily whenever they want. If firms do not undertake these improvements they do not do so because they do not find it profitable.\(^{62}\)

In general, in the second wave of CSR the academic discussion revolves around stepping away from CSR as an add-on marketing tool. Instead, companies’ CSR work should be directly linked to its competitive context or its core business in order to be worth the effort as argued by Porter & Kramer (2006).\(^{63}\) Aguilera et al (2007) follow this argument by suggesting that based on the assumption that companies are being pressured by internal and external actors to engage in CSR

\(^{57}\) (Carroll 1991)  
\(^{58}\) (Vogel 2005)  
\(^{59}\) (Vogel 2005)  
\(^{60}\) (Weaver, Trevino & Cochran 1999)  
\(^{61}\) (Porter, van der Linde 1995)  
\(^{62}\) (Palmer, Oates 1995)  
\(^{63}\) (Porter, Kramer 2002)
actions to meet rapidly changing expectations about business and its social responsibilities, CSR is exposed to decoupling effects so that some companies introduce CSR practices at a superficial level, whereas other companies embed CSR into their core company strategy.\textsuperscript{64} This view is widely adapted in contemporary studies such as the work by Wettstein (2009) who argues that the scope of firm’s social responsibilities goes far beyond the mere donation of money to good causes as was the single focus of the first CSR wave.\textsuperscript{65} As such, the focus of CSR has shifted from only looking at how corporations distribute their profit to how they generate it. To this date CSR is concerned with a much larger range of ethical problems and is directly connected to a company’s core business processes.\textsuperscript{66} Such a holistic understanding of corporate responsibility would logically imply a shift away from the assumption that CSR is a matter of a company’s own judgment. This new perception opens the door for novel research in the field of CSR used strategically leading to a more competitive and better performing company.\textsuperscript{67}

3.1.3 Differences in Perception and Terminology of CSR

As CSR is a socially constructed term it is naturally also culturally related. The resulting diverse terminologies of CSR make it a troublesome task for stakeholders such as investors and analysts to measure how a company performs on ESG factors. Thus an introduced to the different variations of perception and terminology across countries is needed.

Matten & Moon (2008) address that in different countries, there will be different priorities, and values related to CSR that will shape how business act.\textsuperscript{68} CSR has traditionally in the US been defined in terms of a philanthropic model stating that companies make profits unhindered except by fulfilling their obligation to pay taxes. Companies then donate a certain share of the profits to charitable organizations or causes. Corporate philanthropy is generally speaking a US founded phenomenon where companies that do not contribute to society by donating a part of their profit to social causes are hardly criticized publicly by the media, NGOs and interest groups, stressing the voluntary element.\textsuperscript{69}

In Europe the academic debate is relatively young. Garriga & Mele (2004) argue that the European model or perception of CSR is much more focused on operating the core business in a socially responsible way, complemented by investment in communities for solid business case reasons.\textsuperscript{70} Concerns with corporate social performance, stakeholder relations, corporate citizenship, links to financial performance, and new applications of business ethics have extended CSR theory and

\textsuperscript{64} (Aguilera et al. 2004)
\textsuperscript{65} (Wettstein 2009)
\textsuperscript{66} (Wettstein 2009)
\textsuperscript{67} (Porter, Kramer 2006)
\textsuperscript{68} (Matten, Moon 2008)
\textsuperscript{69} (Matten, Moon 2008)
\textsuperscript{70} (Garriga, Melé 2004)
practice, reflecting impacts of European thinking.\textsuperscript{71} In a European context, corporate engagement in social initiatives has been embedded in the national institutional systems, and European companies, therefore, have not developed explicit and articulated CSR strategies. This is what Matten & Moon (2008) label the ‘implicit CSR approach’.\textsuperscript{72} The review of the literature has until now focused on literature of CSR in a company perspective and will now turn its focus towards social responsibility as seen from an investor perspective.

\subsection*{3.2 Investors’ Approach to Social Responsibility}

In terms of measuring CSR and making it more usable for the financial community, two approaches have been found when reviewing the literature: To make socially responsible investments (SRI), and to incorporate the extra financial value added by incorporating the value of CSR into traditional financial analysis. The first approach is a screening method in the portfolio selection process; the latter is concerned with integrating ESG factors into a financial analysis of the company.

As SRI is seen as best practice and currently the most comprehensive way for investors to consider CSR information in their investment decision, a brief description of the development of SRI will be given in order to give a better understanding of the concept. Furthermore, the literature on how investors approach CSR will be reviewed in terms of the performance of SRI funds as well as methods for accounting for social responsibility will be presented.

\subsubsection*{3.2.1 The Development and Methods of Socially Responsible Investments}

Louche & Lydenberg (2006) argue that the development of socially responsible investments in the US and in Europe have differences in the development, but nonetheless share a common project and a pursuit of similar objectives. They argue that SRI is rooted back in the 1970s but even before that, several religious organizations in the US made investments based on moral and ethical considerations. These organizations decided not to invest in anything in relation to alcohol, tobacco or gambling as well as other companies producing or selling products considered to be unethical. Looking at Europe the SRI funds began to develop mainly in Britain but by the end of the 1980s and the beginning of the 1990s several European countries saw SRI funds being born. Also ‘green’ funds emerged in Europe with a focus on ecological and sustainable investments, enlarging the criteria for SRI\textsuperscript{s} worldwide.\textsuperscript{73}

Bengtson (2008) elaborates on the Scandinavian SRI development. By the late 1990s negative screening had spread to become the main screening criterion in Scandinavia. The first Danish

\textsuperscript{71} (Garriga, Melé 2004)
\textsuperscript{72} (Matten, Moon 2008)
\textsuperscript{73} (Louche, Lydenberg 2006)
environmental fund and first ethical fund were not established until 1999. In the beginning of the 2000s SRI went to become increasingly adopted by large investors all over Scandinavia. SRI practices were further sophisticated by investors setting up SRI analysis departments, by ethical councils being established, and the emergence of SRI service providers.\(^74\)

An increased focus on SRI can also be traced in the literature by Cowton (1999) and Sparkes (2001) that started the first attempts to define and describe ethical investment and SRI academically. Cowton describes ethical investors not only to be concerned with how much money an investment generates but also how it generates the money.\(^75\) Sparkes develops the distinction between ethical investment and socially responsible investment. He relates ethical investments to avoiding certain stocks that you do not feel comfortable investing in for ethical reasons and argues that ethical should mainly be used by churches and other value-based organizations. Socially responsible investments on the other hand, are distinguished by the unique combination of seeking both social and environmental goals as well as financial goals approaching market return.\(^76\) Both authors recognize the fact that many similar terms describe SRI and that the concept is developing.

Building on these arguments, Cowton & Sparkes (2004) argue that SRI has gone from margin to mainstream investment and by having more institutional investors adopting the philosophy they can increasingly influence the CSR policies of companies.\(^77\) Moreover, there has been a shift in the methods used to not only screen negatively for companies to avoid, but also to include positive screening of companies, often combined with a ‘best-in-class’ approach.\(^78\) This trend is further underlined by the development of several SRI indices e.g. SAM index series and FTSE4Good.\(^79\) SRI today is still developing but the question that is given most attention in the academic literature is the performance of SRI funds compared to conventional funds.

### 3.2.2 Performance of SRI Funds

Several authors have strong arguments against SRI funds. According to Vogel (2005) SRI funds do not perform either better or worse than other funds in terms of profitability and the same is the case for socially responsible indices. Vogel argues that the market is self-adjustable so if stocks of socially responsible companies were undervalued, fund managers would naturally invest more in these firms’ securities raising the price of the shares.\(^80\) Along the same line of argument Bello

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\(^{74}\) (Bengtsson 2008)  
\(^{75}\) (Cowton 1999)  
\(^{76}\) (Sparkes 2001)  
\(^{77}\) (Sparkes, Cowton 2004)  
\(^{78}\) (Bengtsson, Sparkes, Cowton 2004, Renneboog, Ter Horst & Zhang 2008)  
\(^{80}\) (Vogel 2005)
(2005) has findings indicating socially responsible funds neither to differ from conventional funds in long-run investment performance, nor in asset characteristics or degree of portfolio diversification. These views are distinctive, and several other authors share similar skepticisms. However, there are also several arguments that social responsibility has a positive influence on the economic performance of a company but the studies are divided into investigating different parts of CSR’s influence on economic performance.

Among the arguments for social responsibility having a positive influence on the economic performance, we find Guenster et al. (2005) who investigate eco-efficiency. The authors argue that prior empirical researches differ from each other mainly by the methodologies used and the financial and environmental indicators chosen, and consequently conflicting outcomes arise. The findings show substantial long-term benefits in considering environmental criteria issues in the investment decision. The findings are supported by the study by Semenova & Hassel (2008) indicating that operational benefits make possible higher operating performance and market values for leading environmental companies compared to lagging companies. Orlitsky et al. (2003) also make it clear that numerous scholars researching the relationship between Corporate Social Performance (CSP) and Corporate Financial Performance (CFP) have reached the conclusion that results are inconclusive in the aggregate and have failed to provide clear answer on the causal relationship between the two. To this end the authors conducted a meta-analysis and conclude that there is a positive relationship between the two.

Renneboog et al. (2007) review the literature on SRI and ask a number of questions, among them whether or not investors’ decisions are affected by criteria of non-financial character. They conclude that event studies show that the stock market reacts to news about corporate environmental performance/responsibility but that it cannot be excluded that these reactions are related to cash-flow news. Moreover, good corporate governance and sound environmental standards are associated with higher shareholder value, but there is no evidence on the direction of causality. This means that it remains unknown whether a company creates higher shareholder value due to the CSR initiatives undertaken or whether it undertakes these CSR initiatives due to its financial success. However, investing in companies with these characteristics produces superior returns for shareholders and hence indicates that the stock market underprices public information.

81 (Bello 2005)
83 ‘Eco-efficiency’ can be interpreted as the economic value a company adds (e.g. by producing products and delivering services) relative to the waste it generates when creating that value.
84 (Derwall et al. 2005)
86 (Orlitzky, Schmidt & Rynes 2003)
on corporate governance and environmental performance, at odds with the efficient market theory.\textsuperscript{87} This leads us to investigate whether it is possible to account for sustainability in the same way financial data are accounted for and hence integrated into a valuation.

### 3.2.3 Accounting for Social Responsibility

Schaltegger & Burritt (2006) point to the fact that the term ‘sustainability accounting’ has become increasingly mentioned in the literature even though the concept is rather blurred, and many similar and overlapping definitions are used. They argue that it has become increasingly accepted that the challenge of accounting is to reconsider the non-financial information, forward-looking information and the needs of all stakeholders, so that a holistic picture of the company can be given.\textsuperscript{88} Numbers of studies have tried to link financial performance with environmental and social performance in order to find a correlation or a conceptual link between them.\textsuperscript{89} For instance Chousa & Castro (2006) suggest an integrated framework for the financial analysis of sustainability based on the Dupont system of ratio decomposition.\textsuperscript{90} In addition, the concept of shareholder value as described by Rappaport (1986), have been further extended by Schaltegger & Figge (1997) and Schaltegger (2006) to include the environmental aspect. The models will be further discussed and criticized in the theoretical analysis, as the models serve as contributions to the analysis of how investors value CSR.\textsuperscript{91}

### 3.2.4 Lack of Theoretical Perspectives

As seen from the above reviewed literature on social responsibility from an investor perspective, most literature focuses on empirical studies of how CSR influences economic performance of companies and the performance of SRI funds. A few attempts have been made to incorporate CSR into existing financial models, but what is really needed is theory explaining the relationship between social responsibility and companies’ economic performance. This was realized already in 1985 by Arieh Ullmann who investigated the relationship among social disclosure, social performance, and economic performance, and concluded that the inconsistencies in previous research were due to lack of theory within this field of research.\textsuperscript{92} According to Lankoski (2008) “He identified lack of theory and inappropriate definition of key terms as core problems, and suggested that instead of ‘accumulating studies and trying to control for an increasing number of variables’ researchers should look for ‘the missing element’ that would help to explain the mixed findings

\textsuperscript{87} (Renneboog, Ter Horst & Zhang 2008)
\textsuperscript{88} (Schaltegger, Burritt 2006)
\textsuperscript{89} (Griffin, Mahon 1997, Schaltegger, Figge 1997, Schaltegger, Figge 1997, Chousa, Castro 2006)
\textsuperscript{91} (Schaltegger 2006)
\textsuperscript{92} (Ullmann 1985)
obtained about this relationship."\textsuperscript{93} Even though the debate has evolved since 1985, there has not been a convergence of knowledge.\textsuperscript{94}

The closest proposal to a theoretical framework to this date has been set forward by Schaltegger (1988)\textsuperscript{95}, and further developed by Lankoski (2000), and Schaltegger & Synnestvedt (2002), as it seeks to describe two prevalent schools of thought regarding CSR performance and economic performance.\textsuperscript{96} Schaltegger's theoretical contribution is further discussed in the following chapter including a visual illustration.

3.3 Summary of how the Reviewed Literature Contributes to our Area of Study
To sum up the findings from the literature review we see that the field of study of CSR is broad and embraces various perspectives such as legitimacy, license to operate, moral aspects, corporate citizenship and philanthropy and voluntariness, to name a few. The reviewed literature has shown that the concept of CSR has changed drastically within the last 10 years, from being an assurance of good reputation and brand value to be a necessary investment in a company's long-term competitiveness. Investors' interest in social responsibility has its origins in ethical investments but has developed into the market of SRI. Empirical studies of the performance of SRI funds were reviewed and turned out to be widely varying in terms of scope and method and overall inconclusive on whether or not SRI funds outperform conventional funds. Lastly, some of the few theoretical approaches to integrating CSR and financial performance were reviewed but it quickly became clear that the literature is highly unexplored and theoretical contributions are limited and weak. In conclusion, the scarce existing literature of exploring the link between CSR and financial valuation demonstrates room for further research, both theoretical and practical. Doing this may lead to new aspects of knowledge that can help build the bridge between the understanding of CSR in the business and investor community. The literature review thus validates our research area as well as documents why the theoretical ideas that will be discussed in the following paragraph add value to this thesis.

4.0 Theoretical Framework
As described in the literature review, only limited theory and theoretical approaches exist within this field of study as earlier work has had the form of empirical research. Due to the recent nature of the topic, only very few established theories exist; hence, the theoretical part of the thesis will merely take the form of a discussion. The theoretical analysis in this thesis revolves around why companies and investors perceive the value of social responsibility differently. Theory is used in order to give an explanation of the underlying reasons for these two different perceptions.

\textsuperscript{93} (Lankoski 2008) p. 1
\textsuperscript{94} (Lankoski 2008)
\textsuperscript{96} (Schaltegger, Wagner 2006, Wagner 2006, Schaltegger, Synnestvedt 2002)
According to Schaltegger & Wagner (2006), three approaches have been identified when investigating the link between CSR performance, competitiveness and economic performance. The first approach is through empirical studies, and the second approach is normative studies. The third approach, a theoretical approach, has been divided into two streams of arguments, namely how CSR relates to competitiveness; and the relationship between ESG performance of a company and its economic results. In this thesis we will first empirically describe how companies and investors respectively value social responsibility and next follow the two theoretical lines of arguments, hence firstly focus on linking CSR to competitive advantage and secondly focus on how CSR and economic performance are related.

In the following the theory used in the two theoretical analyses, on ‘CSR & competitive advantage’ and ‘CSR & economic performance’, respectively, will be described. Hereafter it will be explained how the frameworks will be used in this thesis, and subsequently a discussion of its weaknesses and strengths will be made.

4.1 Strategic CSR & Competitive Advantage
The fundamental term competitive advantage is largely concerned with how a company will compete so as to earn and sustain superior performance as argued by Porter (1980,1991) and Barney (1991).

In 2006 Porter & Kramer introduced a fundamentally new way to look at the relationship between business and society that does not treat corporate growth and social welfare as a zero-sum game. Porter & Kramer put forward the argument that companies’ existing approaches to CSR are so fragmented and disconnected from business and strategy that opportunities and potential value are missed. Instead of focusing on the tension between business and society, as previous research mainly has been focusing on, Porter & Kramer are in favor of integrating business and society whereby both parties will obtain value referred to as shared value. Porter & Kramer stress that the approach will only be a success for issues that match a company’s economic interests so that long-term objectives are balanced against the short-term costs. If these short-term costs are neglected this will eventually result in much higher costs if the company is found to have violated its social or environmental obligation.

In order for the company to locate shared value, Porter & Kramer categorize three ways in which corporations intersect with society. First, ‘generic social issues’ refer to where a company’s operations do not significantly impact society and the issue is not material to the company’s long-
term competitiveness. Second, ‘value chain social impacts’ relate to where a company's normal operations significantly impact society. And third, ‘social dimensions of competitive context’, entail that social issues affect the underlying drivers of a company's competitiveness. As seen in the figure below the first way of interacting with society is a responsive way. The second can be both responsive or strategic depending on initiative whereas the third is characterized as strategic CSR.

In order to target shared value the company should plan its CSR efforts according to two dynamics. Firstly, stakeholders are constantly looking to hold companies responsible for social and environmental issues by stressing the financial risk related with non-compliance or not responding to emerging societal topics. These demands from society affects the competitive context the company operates within. In order to navigate among these issues the company should identify points of intersection called outside-in linkages. The competitive context that is framed by Porter’s Diamond, which consists of (1) the quantity and quality of company input, (2) the rules and initiatives that foster competition, (3) the size and sophistication of local demand, and (4) the local availability of supporting industries.102

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101 (Porter, Kramer 2006)
102 Appendix 14 – Porter’s Diamond
103 (Porter, Kramer 2006)
Secondly, companies can map the social and environmental impact on society according to its value chain that consists of all activities the company engages in while doing business. Such inside-out linkages can be negative or positive, can depend on location, and can change over time as new standards and knowledge are introduced, which is illustrated below. This exercise will enable the company to mitigate potential risk and reduce harm of the company’s impact on society.

![Figure 4: Inside-out linkages – demonstrating all the activities a company engages in throughout its value chain, which have an environmental or social impact on society that can either be positive or negative. Source: Own model based on Porter & Kramer (2006).](image)

Thus, the key is to determine which CSR issues that lie within the company’s competitive context. This will first and foremost help the company to work strategically with CSR. Hence, strategic CSR unlocks shared value by investing in social aspects of the context that strengthens company competitiveness. Investments in the competitive context have the potential to reduce constraints on a company’s value chain activities. When value chain practices and investments in the competitive context are fully integrated, CSR becomes hard to distinguish from the day-to-day business of the company and the company can thus be said to conduct strategic CSR work.105

4.1.1 Porter & Kramer in this Thesis

In this project the ‘Strategic CSR & Competitive Advantage’ framework is used in the second analysis to understand and discuss how strategic CSR creates value for a company, namely by generating higher competitiveness for the company. The two thoughts on how the company impacts society, called inside-out linkages, and how society continually influences the company, outside-in linkages, will both be applied in the presentation of the case company. This is used to argue that the company is a frontrunner within working strategically with CSR, and in the second analysis to understand how CSR creates competitive advantage and thereby value. Thus we address the first line of argument, namely that strategic CSR leads to a competitive advantage, which then can give superior value.

4.1.2 Strengths and Weaknesses of Strategic CSR and Competitive Advantage

Using Porter & Kramer (2006) as a theoretical framework can be criticized for lacking substantial empirical support as the main argument is justified with selective case studies where sampling

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104 (Porter, Kramer 2006)
105 (Porter, Kramer 2006)
explanation as well as validity justification lacks. This is a classic point of criticism in all of Porter’s work. However, even though the framework is based on case studies it draws its strength from applying corporate strategic thinking to both leveraging positive social and environmental benefits and mitigating negative social and environmental impacts, in ways that enhance competitive advantage.

Porter & Kramer have an American view on CSR as corporate citizenship or philanthropy is seen as generic social issues that the company has to be good at addressing at a starting point. As seen in the literature review the terms corporate citizenship and philanthropy stem from the US where companies are expected to make donations and participate in charity activities. However European companies tend to have another perspective on CSR where explicit and outspoken CSR strategies have not traditionally been the norm. It can therefore be said that Porter & Kramer’s framework deviates from being a universal tool for companies world-wide.

Another minor point of criticism is that the framework only refers to social issues, whereas the environmental aspect of CSR is ignored. Due to the arising attention from stakeholders to environmental issues, especially in the light of the on-going climate debate, environmental issues are therefore referred to on a par with the societal issues in this thesis.

Another point of critique is that only a limited number of reactions on its relevance in practice exist, due to the fact that the framework has only existed since 2006. However, the article was rewarded the best Harvard Business Review article in 2006 by the McKinsey Foundation for Management Research. With a new introduction to CSR it moves past generic CSR principles as societal influence is seen as the new edge of competitive advantage. In sum, the work by Porter & Kramer (2006) is highly relevant to apply as it illustrates the potential and necessity for systematic change in companies on handling CSR issues and links it to the formation of competitive advantage.

4.2 CSR & Economic Performance
The second theoretical discussion focuses on the second line of argument, namely on CSR and economic performance. In relation to describing the different investors’ view on the relationship between CSR performance and economic success, a theoretical framework developed by Schaltegger (2006) will be used.

Schaltegger has described the link between CSR performance and economic performance where he derives predictions about the relationship between the two. He has two distinct relationships: a ‘traditionalist view’ and a ‘revisionist view’. The commonly held ‘traditionalists view’ argues that the purpose of environmental and social regulation is to correct for negative externalities. This will lead to correcting a market failure, by internalizing an externality, but it increases costs for the company. Thus, the argument is that companies are facing a competitive disadvantage as they take on

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106 (Davies, Ellis 2000)
107 (Schaltegger, Wagner 2006)
higher costs when increasing CSR performance and, hence, decrease economic performance. In contrast the ‘revisionist view’ argues that increased CSR is a potential source of competitive advantage as it can lead to process efficiencies, improvement in productivity, lower cost of compliance and new market opportunities. The author’s argument is that companies that are under regulation, and accordingly must augment their CSR performance, are forced to seek innovations that are both privately and socially profitable. According to the ‘revisionist view’ the ability to create innovation and develop new technologies and product approaches are greater determinants of competitive advantage and economic success, especially in the long-term dynamic perspective. Therefore raising the CSR performance will increase economic success.\textsuperscript{108} This will although only increase economic success to a limited extent, as an indefinite number of initiatives addressing the same aspect of one of the ESG factors will decrease net marginal benefit and sooner or later represent net costs.\textsuperscript{109} An illustration of the relationship is given below.

The dashed line shows the longer-term dynamics representing an efficiency frontier that is developed over time due to technical, regulatory and market changes, which will reduce marginal costs of a given CSR initiative.\textsuperscript{111} This theory is very much based on the regulation of the industries forcing companies to comply with regulations. Wagner argues that the same relationship is present, even for industries that are only voluntarily regulated as Wagner sees increased CSR performance as over-compliance, i.e. doing more than regulation requires.\textsuperscript{112}

\textsuperscript{108} (Schaltegger, Wagner 2006)
\textsuperscript{109} (Schaltegger, Synnestvedt 2002)
\textsuperscript{110} (Schaltegger, Wagner 2006)
\textsuperscript{111} (Schaltegger, Wagner 2006)
\textsuperscript{112} (Wagner 2006)
4.2.1 Schaltegger's Theory in this Thesis

The theory will be used in the second analysis in the discussion of how investors perceive the value of CSR. In this thesis we use the relationships described to explain the different ways investors perceive CSR performance related to economic success. The model will however be slightly modified to contain not only the ‘traditionalist view’ and ‘revisionists view’, but also three groups of investors that will be categorized within this relationship. This will be done in order to illustrate their perception on how CSR performance influences economic performance.

4.2.2 Strengths and Weaknesses of Schaltegger’s Theory

Schaltegger has developed one of the very few theoretical conceptions within CSR and economic performance and the theory has been further developed and elaborated upon several times by the author himself and others, indicating a good ability to describe the relationship. However, the framework is only conceptual as there are no definitions of the concepts on the axes. For the ‘economic success’, it is possible to find a measurable parameter such as Return on Equity (ROE) or Return on Assets (ROA). However, the ‘measure’ for CSR performance shown on the x-axis is difficult if not impossible to define. A single CSR issue, for instance water pollution, could possibly be measured, but not the aggregate CSR performance. The model has been empirically tested and shows that the two ‘views’ have their merits albeit under different conditions.

Before moving on to the empirical analysis, the case company, Novozymes A/S, will be introduced and analyzed by the use of Porter & Kramer’s theory from 2006.

5.0 Company Profile – Novozymes A/S

Novozymes is a world leader in industrial enzymes and microorganisms. The company holds a product portfolio that consists of more than 700 products sold to more than 40 different industries. Novozymes employs about 5,000 persons, half of whom are based in Denmark, the rest is based in locations and subsidiaries around the world such as China, India, Brazil, Africa, the US etc. Novozymes’ products allow their customers to improve the quality of their products and simultaneously make savings on energy consumption and raw materials. The biggest product category is detergent enzymes, which composes 31% of group sales 2008 of DKK 8,146 million.

Novozymes has been listed on the Danish stock exchange since 2000 when the company was demerged from Novo Nordisk, and the current CEO. Mr. Steen Riisgaard was appointed.

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114 (Wagner 2006)
115 (Novozymes A/S 2009)
The holding company is owned mainly by Novo A/S\textsuperscript{116}, which holds all of the A-shares and some B-shares and the majority of the votes with 70.1%.\textsuperscript{117}

The following section will describe relevant areas of the company that are particularly interesting to understand in answering the problem statement, namely the Sustainability Development (SD) center and the Investor Relations (IR) department. To know more about the company in general and current sustainability initiatives, see appendix 11 – Novozymes’ ESG Initiativees, and appendix 12 – Novozymes’ Sustainability Indicators and Recognitions.

**Sustainability Development in Novozymes**

When relating to Novozymes, it is essential to make the distinction between ‘sustainability’ and ‘CSR’.\textsuperscript{118} As Novozymes works with ‘sustainability’ the focus is on the company as a whole, and it is hard to distinguish between ‘sustainability related to the products’ and ‘the company being run in a sustainable manner’. The underlying philosophy is that the two are inseparable, as a company will not sustain, if it does not produce products that contribute to a better world while operating in a sustainable way.

The Sustainability Development (SD) Center is a corporate unit that supports the Sustainability Development Strategy Group (SDSG) and assists lines of business and geographical site presidents in further integrating sustainability development into their operations. As such the SD center is not an add-on function but consists of specialists in the field of sustainability areas. The SD strategy group approves the strategy for the company’s sustainability initiatives, focus areas and targets, and monitors its implementation. In addition, sustainability development is a permanent theme at board meetings twice annually. The organizational set-up is illustrated in figure 6 below.

\textsuperscript{116} The holding company is owned by the Novo Nordisk Foundation, see Appendix 10 – Ownership Structure in Novozymes

\textsuperscript{117} (Novozymes A/S 2009)

\textsuperscript{118} See definitions on pp. 6-7
Novozymes' sustainability performance is regularly evaluated and benchmarked by third-party indices in Europe and worldwide such as Dow Jones Sustainability Index (DJSI) and FTSE4Good, which are targeted towards investors. Achieving a good ranking is not only an important way for the company to demonstrate its corporate reliability externally but indeed is a vital driver for internal business development and awareness creation. Novozymes has received various recognitions for its ability to be a responsible and proactive company that takes part in on-going public debate about current sustainability issues. The SD center cooperates with the Investor Relations department on rating inquiries from investors, the annual report, SRI conferences and roadshows, specific investor meetings and detailed communication on specific sustainability aspects. The main part of the integration is on ratings and the annual report, whereas the other tasks are more ad-hoc.\textsuperscript{120}

\textbf{Investor Relations in Novozymes}

The overall purpose of the department is to ensure that precise, relevant and on-time information is made available to the financial market and the investor community so that trading and pricing of the Novozymes share is based on as accurate information as possible. In addition, the department is responsible for compliance with the rules of the NASDAQ OMX Copenhagen, and other regulatory authorities such as Finanstilsynet. It is the aim of the department that Novozymes is perceived as a reliable and professional company by the stock market. Due to this, almost all communication made public is proofread by the IR department in order to ensure a consistent information flow. Another aim is to ensure liquidity in the stock, and hence ensure that the stock is

\textsuperscript{119} Novozymes website: 
http://www.novozymes.com/en/MainStructure/Sustainability/Approach/Sustainability+development+setup.htm (01.08.09)

\textsuperscript{120} Mr. Claus Frier, Senior Manager, Sustainability Development Center, Novozymes and Ms. Camilla Kinch Jensen, Senior Director Investor Relations, Novozymes
traded so that is stays within the OMXC20 index.\textsuperscript{121}

Moreover, it is the task of the IR department to ensure that the information from the stock market is directed back to the Management and Board of Directors of Novozymes. In practice the department is responsible for the everyday contact and dialog to shareholders, professional investors, and brokers, thereby ensuring a diverse shareholder base in terms of both investment horizon and geographical location. This is done through a minimum of 250 individual investor meetings a year, which include road shows after each quarterly financial statement, and participation in various investor conferences around the world. Moreover, the department occasionally arranges capital market days and investor visits to Novozymes’ locations world-wide. All investor presentation material is made accessible to all interested at the on-line website.\textsuperscript{122}

**Sustainability in Investors Relations**

The IR department is very focused on communicating the business case for Novozymes, which is that “A unique triple leverage on its biotech expertise benefits the financials.”\textsuperscript{123} It is strongly emphasized how Novozymes have an innovation-driven focus to develop new products within biotechnology which has a ‘green’ and sustainable potential, and that this has spurred sales and earnings growth, improved operating margins and added additional growth opportunities like going into BioBuisness. In brief the investment case for Novozymes focuses on innovation and profitability.\textsuperscript{124} However, when including the long-term financial targets, sustainability is further emphasized as Novozymes’ technology allows making “more with less” and thus limits the world’s use of scarce resources. However, social aspects are hardly ever included in the communication as it is primarily in the environmental aspect that the business opportunities are. Sustainability is thus included in the communication to investors, albeit in a business context, as it is a part of the Novozymes identity and a full picture of the company should be provided.\textsuperscript{125}

5.1 Novozymes Working Strategically with CSR

As mentioned earlier, Porter & Kramer (2006) argue that a company must work strategically with CSR so that it is value creating. Accordingly a closer look will be given to how Novozymes undertake their CSR work.

According to Porter & Kramer (2006), in order for CSR to be strategic, it is not enough to address generic social issues. CSR must be strategic as to both benefit society and reinforce strategy at the same time or significantly leverage the capability to improve the competitive context of the company, which was illustrated in figure 2.

\textsuperscript{121} Ms. Camilla Kinch Jensen, Senior Director Investor Relations, Novozymes.


\textsuperscript{123} Appendix 13 – Novozymes Business Case

\textsuperscript{124} Appendix 13 – Novozymes Business Case

\textsuperscript{125} Ms. Camilla Kinch Jensen, Senior Director Investor Relations, Novozymes
Novozymes’ business strategy is to make enzymes and microorganisms for industrial use, but it also includes exploiting new business opportunities within biopolymers and pharmaceutical proteins by utilizing core competencies within fermentation and protein production. In doing this Novozymes seeks the vision of “a future where biological solutions create the necessary balance between better business, cleaner environment and better lives”. Inherent in this vision is an aspiration for making the world a better place and hence CSR is already integrated in the vision of the company. Novozymes works with sustainability, in two different ways, namely in terms of what is produced and how it is produced: (1) As Novozymes’ bioinnovative solutions have the potential to solve some of the world’s environmental and social challenges, the core business is focused on creating solutions that are not only valuable to the company but also to society. (2) Novozymes aims to conduct its business in a financially, environmentally and socially responsible manner. For this purpose the Novozymes Touch, a set of fundamental values, have been developed as guiding principles.

The former objective is related to the product, which constitutes only one part of the sustainability concept. The products help Novozymes’ customers to limit the use of scarce resources and hence mitigate the negative impact these companies have on society, and in that way there is no doubt that Novozymes is contributing value to society. However, as the focus of this thesis is on the behavior of the company, namely on CSR and that the business is conducted in a responsible manner, the attention will be given to the second objective.

In terms of responsive CSR, Novozymes is proactively taking a lot of initiatives to be a good citizen and also in mitigating the harmful effects from the value chain. As examples, Novozymes’ great efforts within energy savings, responsible purchasing practices, careful use of biotechnology and minimizing animal testing can be given. Shifting the focus to strategic CSR the initiatives are harder to find. An example of how Novozymes seeks to transform value chain activities to benefit society is by having clear business integrity principles that outline not to engage in bribery and corruption. By not engaging in such actions, the benefit to society is less difficulty with such issues. Moreover, the company obeys all human right standards and even does more than required, like offering higher than average wages to their employees in developing countries. Such an initiative may provide wealthier and happier employees, which will naturally both benefit the company in terms of lower employee turnover and society in terms of better living conditions for its inhabitants. Another example of strengthening the

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(19.07.09)

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128 Mr. Claus Frier, Senior Manager Sustainability Development Center, Novozymes
competitive context through CSR is the continuous focus on education of employees. Constantly upgrading the employees’ sets of skills both entails more competent or flexible employees as well as more skilled people in general, which may benefit society to a great extent as not all skills are company specific.\textsuperscript{129}

In terms of working actively and in tandem with outside-in and inside-out linkages, as explained by Porter & Kramer (2006), several examples can be given. The society increasingly demands companies to obey human rights, to use fewer animals for testing, to be more energy efficient etc. Novozymes meets all these demands and ensures the impact on society will be less harmful if not positive.\textsuperscript{130} An example of an inside-out effect is the way Novozymes as a company has integrated sustainability into its core strategy and business processes, which have made many companies look towards Novozymes for inspiration on this. Furthermore, the Danish government has recently passed a law requiring the 1,100 largest Danish companies to report on CSR initiatives undertaken.\textsuperscript{131} Something Novozymes has done for more than a decade.\textsuperscript{132}

From this and the previous description of the organizational set-up of the sustainability board and its wide organizational reach, it is evident, that Novozymes is working proactively to build focus around sustainability and integrate environmental and social initiatives into core strategies. Moreover, the Sustainability Board facilitates knowledge about all the activities in the value chain between all CSR responsible, which is pointed out as a key element to strategic CSR according to Porter & Kramer (2006). Overall, Novozymes works with CSR in both a responsive, but more importantly in a strategic manner as termed by Porter & Kramer (2006). Hence Novozymes legitimately sees additional value created by the sustainability work undertaken and the question becomes whether this value is fully realized by the investors. According to Mr. Claus Frier, Senior Manager Sustainability Development, there may potentially be more value related with Novozymes’ CSR work than what the investors’ value.\textsuperscript{133}

This intriguing question will be further investigated in analysis three of the company case study. First, it is analyzed if a global wide tendency, similar to the one in Novozymes, exists. This is done, in analysis one, by an empirical analysis of how companies and investors perceive the value of CSR. And following, in analysis two, a theoretical discussion will be used to analyze our findings.

\textbf{6.0 Analysis 1: Empirical Analysis of the Business Case for CSR}

The first analysis seeks to provide an answer to the first sub-question: “How is CSR valued in terms of the business case for social responsibility from a company and investor perspective

\textsuperscript{129} Mr. Claus Frier, Senior Manager Sustainability Development Center, Novozymes
\textsuperscript{130} Novozymes: \url{http://www.novozymes.com/en/MainStructure/Sustainability/Our+approach/Our+actions.htm} (21.07.09)
\textsuperscript{131} (The Danish government May 2008)
\textsuperscript{132} Novozymes: \url{http://www.novozymes.com/en/MainStructure/Sustainability/Our+approach/Our+actions.htm} (21.07.09)
respectively?” This serves to validate or dismiss the initial assumption that the perceptions of the value of corporate social responsibility from the company and investor perspective differ. Firstly, an overview of the main agents including organizations, networks, non-profit business organizations, legislative bodies etc. will be outlined and their influence will be described, thereby providing an overview of the environment of social responsibility in the context of companies and investors. This is an important task in order to understand the field of study. Secondly, the current situation of companies and investors handling CSR will be described, leading to the business case for CSR as seen from the company and investor perspective. This will frame and identify the problem of the overall research question. The international and geographical scope will be limited to focus on the US, Scandinavia, and rest of Europe due to the fact that most leading companies within CSR and mainstream investors are present here. The analysis is purely empirical and the data applied is mostly secondary data, mainly reports derived from databases and websites, however, primary data from expert interviews will also be applied.

6.1 Drivers of Social Responsibility
Entering the field of Corporate Social Responsibility it quickly becomes obvious that the drivers of social responsibility are numerous and dispersed. Many agents are currently present and, as CSR is a relative new phenomenon, the battle to develop the most recognized methods, such as reporting guidelines, assurance standards, ratings indices and recognitions, is enduring. This also makes the field very difficult to navigate in when working with CSR in practice. Below a ‘map’ of the drivers, both in relation to the company and to the investors, is depicted. This map is by no means exhaustive, as it only includes the main drivers and agents we find relevant for the problem at hand. In the following, the different clusters will be described, based on reports from business organizations and initiatives as well as reports from the different agents, which is also used in the subsequent analysis of the business case for social responsibility. A brief description of each individual agent can be found in appendix 9 – Description: Drivers of Social Responsibility.
In regards to the company, several agents seek to drive the development for social responsibility. These agents can be divided into different clusters in terms of the means they use to influence the development. The first identified driver is the cluster of guidelines for companies. These agents are vital drivers of CSR reporting as they offer companies a starting point in addressing CSR issues and reporting on them. Moreover, various management standards exist within the field. These serve to provide a number of standards that the company can choose to comply to and facilitate setting up management systems and procedures. Assurance standards have evolved in recent years as a respond to the changing environment of CSR standardization to ensure quality control, documentation, and preparing assurance reports. The dominant guidelines and standards are designed to improve continuously over time in order to capture lessons learned and new information, as well as reflect current views on the roles and expectations of companies. Auditors have seen an extended business opportunity and hence are active in assisting companies with networks and research platforms and recommendations for further engagement in CSR related activities. The mostly used standards and codes for corporate responsibility have been developed by multi-stakeholder processes and offer different guidance tools for companies in their development of strategy and management systems. These initiatives clearly demonstrate the extent to which external stakeholders are seeking to hold companies accountable for social and
environmental issues and highlight the potential financial risks embedded with not behaving responsible.  

There are also agents that relate to both companies and investors. Some of these are found in the cluster consisting of national and international organizations that work to develop and enhance socially responsible investments. Their purposes differ slightly according to their relation to either companies and/or investors. Nonetheless, they all facilitate knowledge sharing, often across countries, as most of the organizations depicted are international. These organizations are among the most powerful drivers of the development of social responsibility.

Indices are another outcome of the fast growing reporting trend and constitute a cluster. They provide very systematic information to investors as comparability between companies and sectors are high. Depending on the provider, several indices are made comprised by the best companies within a sector or region. Moreover, there are a number of recognitions in terms of 'listings' or awards by which a company can gain recognition for what they are doing in terms of CSR.

As the above tools have grown in prominence, they have also become increasingly prescriptive, and many companies focus solely on achieving a high score. Achieving a high score and rating is often an extraordinarily time consuming effort that directly replaces time that CSR professionals would otherwise spend on designing and managing their programs.

On the investors' side, the first cluster is named guidelines for investors, as these stakeholders have the thing in common that they all provide some kind of guidelines on how investors can invest socially responsible e.g. in terms of adopting principles. On the investor side, there is also a cluster of screening agencies that to a lesser extent drive the development of socially responsible investment but rather facilitate and speed the development. These agencies have made a business out of investigating companies’ CSR initiatives and hence provide investors with information needed in order to select stocks according to specific criteria on the ESG factors. In the same way, some asset managers are facilitating the development as they both see the business opportunity but also often provide research and publications on the matter.

The different agents depicted above all play a role towards either the company or the investment community in driving the development for social responsibility. Not all play an equally active role, as some work proactively on platforms to develop e.g. guidelines for reporting and incorporating CSR into the business. This could be Global Compact and Global Reporting Initiative (GRI) as well

134 Appendix 9 – Description: Drivers of Social Responsibility
135 (Mirvis 2009) Appendix 9 – Description: Drivers of Social Responsibility
136 Appendix 9 – Description: Drivers of Social Responsibility
UNPRI, but also organizations like the WBCSD, United Nations Environmental Program Finance Initiative (UNEP FI) and World Economic Forum (WEF) in corporation with AccountAbility engage in promoting sustainable development among both companies and investors. Providers of standards and indices are biased in their contribution to the development, as they seek to facilitate the work of CSR practice, but also have business opportunities by getting their standards or indices accepted and recognized by the larger business community. In the same way, assurance companies and screening agencies are less of a driver and more of a beneficiary. Nonetheless, many of these companies are also engaged in larger communities working proactively with the development, for instance GES Investment Services (GES) who contributes to the research undertaken by Eurosif. Thus, the assurance companies and screening agencies contribute indirectly to the development as they provide valuable practical expertise in this infant stage of social responsibility. There are also some overlaps in terms of agents belonging to several clusters. Take Sustainable Asset Management (SAM) as an example: SAM is an asset manager, but it also undertakes research and provides all the input for the DJSI, in the same way as Ethical Investment Research Service (EIRIS) provides FTSE with research and KLD Research & Analytics provide SustainableBusiness.com with data. Overall, the different agents contribute to the development of social responsibility.

6.2 Companies’ Perspective on CSR

Companies interpret CSR liberally. For some, it is simply a management approach in which the interests of all the organization’s stakeholders are identified, assessed and respected. For others, CSR is a dynamic process of fulfilling the ‘contract’ between the company and society. Having a genuine understanding of the way a company impacts the economic, environmental, and social circumstances of its stakeholders is at the heart of CSR.

As this thesis does not address all possible stakeholders of the company but solely investors, the subsequent analysis of how CSR is valued by companies is therefore only concerned with current and potential investors of a company.

6.2.1 Current Situation – CSR Reporting and Regulation

CSR information and data presented in financial reporting forms, such as annual reports, are for many analysts and investors valuable as it is a good indicator of a company’s current value and future potential. Therefore trends of CSR reporting give an idea of how companies value CSR.

According to KPMG, a recent global survey among Global Fortune 250 companies and the world’s

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137 (European Social Investment Forum 2008)
138 (UNEP FI (North American Task Force) 2008)
139 Appendix 9 – Description: Drivers of Social Responsibility
100 largest companies by revenue in more than 20 countries\textsuperscript{140}, shows that reporting of CSR in general has increased worldwide from 2005-2008 as indicated in the figure 8 below.

\textbf{Figure 8: The development of large companies with stand-alone and integrated corporate responsibility reports between 2005-2008 by country. Source: KPMG Corporate Responsibility Survey 2008}\textsuperscript{141}

About 80\% of the 250 largest companies worldwide have published reports, compared to 50\% in 2005.\textsuperscript{142} Generally speaking, companies that report on CSR are especially found in the oil and gas, metals and engineering, and chemicals and synthetics sectors, largely because of the pressure and high expectations of stakeholders\textsuperscript{143} In many European countries for instance UK, the Netherlands and France more than 50\% of the largest companies have reported on their CSR practices since 2005. US companies are also becoming aware of their global reach and impacts on society, and have significantly increased their level of transparency in reporting which is reflected in the massive increase in CSR reporting from 32\% to 74\% between 2005 and 2008.\textsuperscript{144} Looking at the Nordic countries Swedish companies are frontrunners in terms of a rise of 40 percentage points from 2005 to 2008. Denmark holds a very low placement as only 24\% of the largest companies report on their CSR performance.

\textsuperscript{140} (Bartels 2008, Sørensen, Preben J.& Nielsen, Ena 2008)  
\textsuperscript{141} (Bartels 2008)  
\textsuperscript{142} (Bartels 2008)  
\textsuperscript{143} (Bartels 2008)  
\textsuperscript{144} (Bartels 2008)
Stand-alone CSR Reporting and Integrated Reporting

When looking at CSR reporting trends, a distinction in reporting forms should be made between a stand-alone CSR report, solely including CSR information, and an integrated annual report, including both financial and CSR information. As illustrated in figure 8 above integration of CSR reporting into the annual report remains the exception and not the rule for the world’s largest companies as only 7% in the UK, 12% in France, and respectively 1% and 2% of the largest companies in Sweden and Denmark have engaged in integrated reporting.\textsuperscript{145} When raising the question whether CSR reporting will become integrated into annual reports, as seen in France, Norway and others, or if it will remain a stand-alone practice, many experts point to the potential of regulation. Along with a greater demand for better and transparent social and environmental information from economic stakeholders such as investors and customers, more widespread integration of ESG information into annual reports may be stimulated.\textsuperscript{146}

Measuring Impact of CSR Performance

Reporting is just one component of having a comprehensive approach to corporate responsibility management, which includes other essential elements such as defining strategy, developing and implementing policies and procedures, and evaluating performance. According to KPMG’s survey the top tier of companies with a publicly available CSR strategy counts France, UK and the US. Surprisingly, countries such as Sweden and various European countries that usually top the reporting tables are found at the bottom of the strategy table. This is indicating that although reporting has spread quickly among companies worldwide, the development of a full corporate responsibility management system takes more time.\textsuperscript{147}

\textsuperscript{145} (Bartels 2008)
\textsuperscript{146} (Bartels 2008)
\textsuperscript{147} (Bartels 2008)
With corporate responsibility strategies in place the WBCSD argues that companies should optimally be able to quantify their strategic commitments, at least roughly. Performance indicators, that are metrics by which a company can measure its progress against stated objectives, are often applied to do this. Looking at recent trends, three-quarters of the world’s 250 largest companies have a corporate responsibility strategy that includes defined objectives. More than 50% of the largest companies in France, UK and Norway are publishing their CSR strategy. In Denmark only 14% of the largest companies report their CSR commitments using quantified targets. A recent survey from spring 2009 made by PA Consulting Group, investigated how 57 of the largest Danish companies value CSR and the research confirms this low number. The survey shows that one third of the consulted Danish companies do not have quantified targets for their CSR activities making it difficult to measure impact. But the surveyed companies still believe that their CSR activities add value, making it problematic to communicate the message of value creating CSR to stakeholders that only value quantified performance. This indicates that even though companies value CSR highly, they lack the ability to communicate their CSR performance.

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148 (Bartels 2008)
149 (World Business Council for Sustainable Development 2009b)
150 (Bartels 2008)p. 26
151 (PA Consultancy Group 2009)
152 (PA Consultancy Group 2009)
because measurement of impact using target-settings and strategy goals are rarely used. If the measured targets related to CSR practices are not communicated, it becomes very difficult for investors to include the value in their valuation practice. Overall, more than half of the world’s largest 250 companies publicly disclose new business growth opportunities and report on the financial value of corporate responsibility.

**Regulation – An Important Driver of CSR Reporting**

Regulation of how companies should report on their CSR activities is a clear effect of the general attention on firms’ social responsibility towards the local and global society. This means that more companies are practicing CSR and report on their performance as seen in figure 8. Several examples can be mentioned of European regulation initiatives such as the Companies Act 2006 in the UK, and the French New Economic Regulations Act 2001. In November 2007 the Swedish government was the first government in the world to publish mandatory guidelines for sustainability reporting for all 55 state-owned companies. Denmark follows this trend, although in a less restricted manner, as the largest 1,100 enterprises, including private and state-owned companies and institutional investors, are obliged to include CSR information in the annual financial reports, beginning in 2010. Generally speaking, these recent regulation initiatives on CSR reporting are mostly voluntary. Mr. Hans Henrik Munch-Jensen from Prospect comments this development by arguing that the majority of Danish companies are reactive in terms of a ‘we have to’ mentality. They do not have the processes in place to enable sound reporting, which results in CSR reporting of low quality. The only reason why there is an increase in companies’ interest in CSR reporting is due to the new Danish directive, and Mr. Munch-Jensen adds that regulation is an important driver to help lifting the lower level as well as a means of awareness creation. Demands from foreign markets to companies with an international presence present an opportunity for these companies to benefit from taking on a proactive approach to CSR issues. According to a representative from Business for Social Responsibility (BSR) “It can be necessary to make specific requirement for how to report right now as we are in a transition phase as CSR reporting is a relatively new phenomenon. Regulation can help some companies move ahead, and facilitate development.”

In sum, it is doubtful that the world’s largest companies would engage in CSR reporting practices using various formats such as standards, guidelines and integrated reports unless they are

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153 (Bartels 2008)
154 (Bartels 2008)
155 (The Danish government May 2008)
156 Appendix 3 - Expert Interview: Prospect
157 (PA Consultancy Group 2009)
158 (PA Consultancy Group 2009)
benefiting from it. This was demonstrated by the vast increase in CSR reporting among the 250 largest global companies from 50% in 2005 to 80% in 2008. The presented CSR reporting trends indicate that there is a common belief among the largest global companies that CSR commitments are key indicators of a company’s current value and future potential. However, integration of CSR reporting into annual reports is an emerging practice but only for the few whom already has rather sophisticated reporting systems and performance measures in place. Recent regulation initiatives worldwide indicate that CSR is regarded valuable and necessary but most are voluntary. In order to get acknowledged for good CSR performance by investors, CSR performance should be communicated to investors in a systematic and transparent way. According to the WBCSD the major barriers for companies that strive to communicate their CSR performance in an integrated manner on par with financial data are that companies report differently on CSR. In addition their CSR data can vary from year to year, making it hard to deliver comparable and material data where the relationship to financial performance is clear.

6.2.2 The Business Case for CSR – the Company Perspective

A recent survey from McKinsey & Boston College from 2008 demonstrates that CSR can be related to measurements the market already accesses. Companies with an advanced approach to environmental, social and governance programs define the business case for CSR as creating value in the form of influencing a company’s competitiveness and profitability. CSR becomes a profitable business tool when it is used to promote efficiency improvements in operations or improves workforce efficiency, linking CSR directly to margins, which effect profitability and thereby the company’s financial performance. Shareholder value is another measurement parameter of CSR when sustainable development is used as a vital catalyst for new profitable business opportunities that can create long-term competitiveness. Mitigations of regulatory risk and risk of negative effect on the company’s reputation as well as avoidance of scandals are related to long-term financially valuable outcomes. CSR from a company point of view can impact business performance, which is reflected in the company’s financial performance and shareholder value respectively. However, CSR factors are often referred to as ‘intangibles’ when CSR-related initiatives are transferred into value components. BSR argues that intangibles are powerful drivers of value creation but at the same time they are often hard to define as individual drivers of financial or shareholder value as they are inadequately expressed. However, an exemplification is

159 (Bartels 2008)
160 (World Business Council for Sustainable Development 2009b)
161 (Mirvis 2009)
162 (Global Reporting Initiative 2009)
163 (Mirvis 2009)
164 (White 2006)
necessary of how CSR relate to value creation so that it can be estimated by the investor community.

CSR and Financial Performance

CSR can produce direct benefits for the bottom line. Operational efficiencies can be achieved through reducing energy and materials as input factors for production, waste can also be reduced and materials can be recycled.\textsuperscript{165} CSR initiatives can also be traced to the creation of new market opportunities such as developing manufacturing processes that can be expanded to other plants, regions or markets.\textsuperscript{166} As a result operational efficiency improvements will impact return on capital positively leading to an increase in a company’s market share.\textsuperscript{167} Thus, adopting the perspective that CSR can be measured in terms of financial performance implies seeing CSR as an investment that helps differentiate a company, its products and services contributing to growth opportunities. If the investment is successful the CSR initiative can be measured as improvement on the company’s financial performance.\textsuperscript{168}

CSR and Shareholder Value

As most intangibles are hard to relate directly to financial performance, most CSR initiatives can be linked to shareholder value. CSR has shown to have a demonstrable impact on future growth opportunities. These are reputation, new markets, new products, new customers or market share, and innovation.\textsuperscript{169} Firstly, current and emerging stakeholder issues will increasingly shape the business environment and will pose a range of risks and opportunities for companies. Leading companies will use this as an opportunity to create competitive advantage by building reputation and creditability with key stakeholders such as regulators, NGOs and international organizations. Secondly, new products can be developed to meet unmet needs and increase differentiation compared to competitors, thereby influencing shareholder value.\textsuperscript{170} Thirdly, CSR can be used to engage customers to build knowledge of future market expectations and behaviors, which can align the company’s strategic outlook with future demand. Fourthly, using innovative technologies to develop products or services for unmet needs for instance affordable food supply, can ensure future growth.

License to operate is a central concept when taking about CSR and shareholder value. CSR creates a stronger license to operate by being close to stakeholders such as customers, employees, investors, and the local and global community. When a company is out of touch with its

\textsuperscript{165} (Mirvis 2009)
\textsuperscript{166} (Willard 2002)
\textsuperscript{167} (Mirvis 2009)
\textsuperscript{168} (Mirvis 2009)
\textsuperscript{169} (Mirvis 2009)
\textsuperscript{170} (Mirvis 2009)
stakeholders the result can be billions of dollars wasted. Thus, license to operate is not a legal license, but a grant of permission to undertake trade or carry out a business activity based on an agreeable social contract between the company and the overall society.\footnote{Mirvis 2009} In addition, CSR can make the company more adaptable to changes. Companies that are flexible enough to respond to unforeseen challenges, such as remaining in countries or communities during times of crisis or conflict, are often able to reap long-term benefits. They are also able to secure relationships and credibility with local communities.\footnote{Mirvis 2009} Furthermore, investing in education of employees and development skills can strengthen the management quality, leading to higher competitiveness in the long-run.\footnote{Mirvis 2009}

All companies take risks and make judgements about the level of risk the company anticipates. Many companies are expanding their definition of risk to encompass wider and longer term risks that incorporate social and environmental issues.\footnote{Arthur D. Little 2003} Examples of CSR related risk management tools could be to minimize regulatory risk by compliance with minimum standards, ensure access to raw materials as input into the company’s supply chain and avoidance of negative publicity. Thus, the business case for CSR exists when a company can demonstrate positive impact on company value, but not necessarily directly link it to financial performance. A high level of reputation or legitimacy in societies in which a company operates can affect the company’s ability to access new markets and sustain long-term license to operate, in total enhancing competitiveness.\footnote{Mirvis 2009} In general, CSR performance that results in higher shareholder value is thus realized on a very long-term, making it harder to communicate the value obtained year by year to investors.\footnote{Mirvis 2009}

In summary, the business case for CSR from a company perspective is that it improves profitability and competitiveness, which can be linked to financial performance on the one hand, and shareholder value on the other hand. Firstly, CSR can allow the company to reduce costs through operational and manufacturing efficiencies that are measured in the company’s financial performance. Secondly, obtaining a strong license to operate reflects legitimacy and creditability from stakeholders and the overall society, which can decrease financial risks or add value to shareholder wealth. Engaging in CSR activities that make the company meet social or environmental future needs are rarely directly related to financial performance but generate long-term shareholder value.
6.3 Investors’ Perspective on Social Responsibility

As seen in the literature review the universe of SRI is wide and very diversified, which makes it necessary to split the concept up to make it more manageable. In doing this, the terminology of the leading organization within the field, namely Eurosif, will be applied. The investors can be divided into three categories as shown beneath in figure 10. The first category contains ‘Mainstream financial investors’ who use exclusively financial data when selecting stocks, and consequently no social responsible considerations are included. The second category is a large group of investors that in some way aims to consider ESG data when selecting stocks. This group is named ‘Broad SRI’ by Eurosif, but will in this thesis be referred to as ‘Mainstream SRI investors’ as the methods used by the investors are characterized as being rather simple. The third category contains investors that include ESG data into their investment analysis in a systematic and sophisticated manner, and is referred to as ‘core SRI investors’. The continuum below shows the level of ESG data considerations and accordingly the three groups of investors.

Level of ESG data considerations:

<table>
<thead>
<tr>
<th>None</th>
<th>Some</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mainstream Financial Investors</td>
<td>Mainstream SRI Investors</td>
<td>Core SRI Investors</td>
</tr>
</tbody>
</table>

Figure 10: Categorization of three groups of investors according to a continuum of ESG data considerations in investment decisions. Source: Own model.

As the practice of socially responsible investments (SRI) is currently the most comprehensive way of integrating social responsibility into the investment decision, the development and current status of SRI in comparison to traditional investments based on modern portfolio theory, will now be further explored.

6.3.1 Current Status of SRI

Today it has become increasingly recognized that the concept of socially responsible investment involves including environmental and ethical criteria into investment decision-making by using negative or positive screening criteria. Moreover, shareholder engagement and divestment have been accepted as a means to invest socially responsible. The total size of the SRI market amounts to €4.96 trillion worldwide. The majority of investments, €4.58 trillion, stem from the US

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177 (European Social Investment Forum 2008)
178 (Bengtsson 2008)
and Europe and only smaller amounts of €334 billion, €41 billion and €5.5 billion stem from Canada, Australia and Japan respectively.\textsuperscript{179}

**US**

In 2007, $2.71 trillion (€1.92 trillion) were under SRI management in the US, which amounts to roughly 11% of all assets under management in the US. This is a massive increase of 324% since 1995 compared to the overall investment universe growing less than 260% in the same period. The increase has been notably significant in the last few years. According to the American Social Investment Forum the major forces behind the growth of SRIs in the US are related to money managers increasingly acknowledging the demand for social investing products from institutional investors, high-net-worth individuals and individuals seeking SRI options in their retirement and college-savings plans. Moreover, there is a growing concern about the climate and the risk it imposes on money managers' portfolios.\textsuperscript{180}

**Europe**

According to Eurosif, the current total SRI assets under management amount to €2.67 trillion as of December 31st 2007. The €2.67 trillion is divided into two groups: ‘Core SRIs’ consisting of €512 billion and ‘mainstream’ SRI of €2.15 trillion. This amount is based on a survey of 13 European countries, and even though only 9 countries where surveyed two years ago, this amount still represents an increase in SRI assets under management from €1.03 trillion. Considering only the 9 countries surveyed both years, this represents a growth of 102% over two years. Comparably, the MSCI Europe index\textsuperscript{181} grew only 16.16% in the same period suggesting a real market growth for the SRI funds of approximately 86% over the two years. In total, the SRI industry is estimated to represent around 17.6% of the total €13.5 trillion industry of assets under management in Europe. These assets are managed almost entirely by institutional investors, as they are responsible for 94% of all European SRIs.\textsuperscript{182} Especially Britain, but also Sweden, were among the pioneer countries in SRI\textsuperscript{183}, but today the Netherlands and Britain takes the lead in terms of market size. The fastest growing markets of SRIs are the German, French and Swiss markets. Belgium is the European country with the largest share of SRIs of its domestic asset management industry. Eurosif’s survey concludes that the main driver for future SRIs will come from institutional investors as risk management measures, of climate changes for instance, are increasingly being considered.

\textsuperscript{179} (European Social Investment Forum 2008)  
\textsuperscript{180} (Social Investment Forum 2007)  
\textsuperscript{181} Morgan Stanley Capital International Europe Index  
\textsuperscript{182} (European Social Investment Forum 2008)  
\textsuperscript{183} (Louche, Lydenberg 2006)
Moreover, legislative changes are considered to be one of the main drivers for SRIs in the coming three years as well as NGO and media pressure.\textsuperscript{184}

**Denmark**

Of the Scandinavian countries Denmark was the last country to embrace the opportunities of SRIs having the first SRI funds established in 1999, long after SRI had manifested itself in the other Scandinavian countries.\textsuperscript{185} Still today, both Mr. Erik Alhøj from GES, and Mr. Munch-Jensen from Prospect, agree, that Denmark is lagging behind many other countries when it comes to engaging in SRIs.\textsuperscript{186} The Danish SRI market amounts to €114.5 billion, just over 4% of total European SRIs. ‘Core SRIs’ amounts to €45.7 billion divided between ethical exclusions and best-in-class practices. Simple screening based on norms, such as ILO conventions, OECD guidelines, and UN Global Compact constitutes the largest share of ‘mainstream SRIs’ in Denmark, whereas shareholder engagement represents a smaller share. Recent growth in SRIs can be explained partly by the UNPRI. Moreover, the CSR legislation of December 2008, is expected to contribute to the growth of SRIs. The development is driven mainly by institutional investors, as there are only 8 retail SRI investors with meager assets under management.\textsuperscript{187}

**6.3.2 The Business Case for Social Responsibility – the Investor Perspective**

As described earlier, asset managers have been significantly slower in terms considering social responsibility at least when referring to mainstream investors. Still, today, when SRIs are rapidly growing it only constitutes between 11% (US) and 17% (Europe) of all assets under management, and for this estimation of SRI, a very broad definition is used, including both ‘core SRIs’ and ‘mainstream SRIs’. As depicted in the definitions, ‘mainstream SRI investors’ constitutes a large group of investors who somehow aim to consider ESG factors in their investment decisions, but many of these investors still have much to improve in their methods of considering ESG factors.

Currently ‘core SRI’ can be categorized as the most comprehensive way to consider social responsibility and this field is rather new to the larger investment community. At the European level, ‘core SRIs’ constitutes only 19% of total SRIs or only 3.4% of the €13.5 trillion assets under management in Europe, equaling €459 billion. Hence, the remaining €13 trillion are under traditional management or under the management of ‘mainstream SRI investors’.\textsuperscript{188} Hence, ‘mainstream financial investors’ and ‘mainstream SRI investors’, which are shown in the purple and blue parts in the diagram below, will be our focus of attention in the following.

\textsuperscript{184} (European Social Investment Forum 2008)
\textsuperscript{185} (Bengtsson 2008)
\textsuperscript{186} Appendix 3 – Expert Interview: Prospect, and Appendix 4 – Expert Interview: GES Investment Services Denmark.
\textsuperscript{187} (European Social Investment Forum 2008)
\textsuperscript{188} (European Social Investment Forum 2008)
Increased attention to ESG factors

According to modern portfolio theory, an investor’s objective is to maximize the return on the investment at the lowest risk possible.\textsuperscript{190} Traditional financial analysis and investment decision-making focus solely on the financial data available, however there seems to be buy-in on the fact that ESG factors are important for company value. According to UNPRI “There is a growing view among institutional investors that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios”.\textsuperscript{191} This is supported by the fact that the number of signatories has doubled in twelve months to approximately 360 institutions.\textsuperscript{192} Likewise a report from BSR concludes that there seems to be buy-in of the ESG concept from institutional investors when reading their publicly stated policies.\textsuperscript{193} Both BSR and Eurosif point to the fact that ESG factors were included as a topic at the CFA Institute Annual Conference 2008, signifying ESG factors are under way of being incorporated into conventional investment practices, receiving attention from mainstream investors.\textsuperscript{194} Also the Carbon Disclosure Project (CDP) reports that 77\% of respondents of an investor survey indicates that investors factor in climate change information into their investment decision or assets allocation decision, as well as the majority of these respondents believe that this information is very or somewhat important.\textsuperscript{195} The reasons for this increased attention to ESG factors by investors can be ascribed to pressure from NGOs and the media, and an increasing demand from institutional investors on risk management especially on the climate change area, as well as a growing interest from wealthy individuals.\textsuperscript{196} When looking at Danish investors, who were rather late in adopting concepts of socially responsible investments, Mr. Munch Jensen from Prospect, believes Danish investors are under pressure from foreign companies and investors to include ESG factors into their investment decisions.\textsuperscript{197} Thus, foreign investors drive the increased attention towards ESG factors in a Danish context.

\textsuperscript{189} (European Social Investment Forum 2008)
\textsuperscript{190} (Elton et al. 2003)
\textsuperscript{191} UNPRI: \url{http://www.unpri.org/about} (19.07.09)
\textsuperscript{192} (United Nations Principles for Responsible Investment 2008)
\textsuperscript{193} (Business for Social Responsibility 2008, June 25) p. 5
\textsuperscript{195} (Carbon Disclosure Project - Mercer 2009)
\textsuperscript{196} (European Social Investment Forum 2008)
\textsuperscript{197} Appendix 3 – Expert Interview: Prospect
Barriers to Integrating ESG factors

Investors generally see a lot of barriers for an integration of ESG factors into their investment decision to happen. According to BSR, there are a number of barriers to integrate ESG factors into mainstream investing. Some of these relate to the materiality of the data, such as lack of long-term empirical evidence linking ESG criteria to financial returns, and a need to regulate reporting on ESG factors in order for reliable comparisons to be made by financial services companies. Many investment professionals look for at least a ten-year data horizon. As only SAM, who makes the ratings behind the DJSI, has reached the ten-year threshold this year with a comprehensive dataset, the data is limited. Speaking to a representative from BSR, the buy-in from investors seems to be more of a verbal character than actually used in practice. The interviewed representative emphasizes talking about CSR as a broad term is problematic as it makes it difficult for investors to grasp. In the same line of argument, Effas suggests companies make KPIs for ESG so that the investors themselves can make comparisons among companies. Nonetheless the proposed linkage to connect KPIs directly to CSR is vague.

Another very relevant barrier pointed out by both BSR and AccountAbility is the contradictory time frame of benefits from CSR and that of investors. Inherently, some of the ESG investments are long-term by nature, and hence a direct benefit cannot be realized until several years ahead. This conflicts with shareholders’ short-term perspective where gains often must be realized within a year. In order for both analysts and fund managers to meet the performance targets of the clients, such as pension fund trustees, they must be short-term minded making it hard to integrate long-term ESG perspectives. Mr. Simon Zadek, CEO at AccountAbility states: “When pension funds say they are long-term investors, what they mean is that they have rolling investments in largely indexed linked funds. To speak accurately, this makes them perpetual investors making short-term investments, forever.” Thus, the historical demand for quarterly reporting and the increasing trend toward short-term investing are both at odds with the theory that proposes that ESG criteria add long-term value. Lastly there are some very fundamental barriers that are linked to the capacity and the philosophy of the investment professionals. In terms of capacity, many investors are uninformed about ESG issues and are only trained to assess fundamental financial data. One way to overcome this problem is to ensure that the academic community widens the scope of the finance field, for instance in MBA programs and in the CFA exam, so that future investment professionals are well versed in these issues. This will also, over time and in conjunction with the

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198 (Business for Social Responsibility 2008, June 25)
199 Appendix 2 – Expert Interview: BSR
202 (World Economic Forum & AccountAbility 2005) p. 19
203 (Business for Social Responsibility 2008, June 25)
previous mentioned barriers, partly overcome the cynicism among mainstream investors to integrate ESG factors into their investment decisions. Lastly, investors are often unwilling to depart from business as usual, so a different and more open mindset, where the idea that the inclusion of ESG data will lead to future value, is needed.204

In short, investors understand that social responsibility is becoming increasingly important. However, mainstream investors in general do not have sufficient proof in the form of a documented business case for social responsibility, as they need evidence of a link to business performance. Moreover, they see immense barriers to incorporating CSR into their investment decisions due to lack of comparable and material data, challenging the capacity and mindset of current investors. Importantly, the inherent long-term nature of social responsibility is at odds with the short-termism reining the mainstream investment community.

6.4 Problem Identification
From the analysis it becomes clear that an increasing number of companies report on their CSR initiatives, but many fall behind on integrating CSR into the corporate strategy. Moreover, only few companies set up targets and goals for their CSR strategies. Additionally many do not report on their CSR performance in a systematic and transparent manner, which makes it hard to capture the attention from mainstream investors.

One the other hand investors are caught in the traditional approach to company valuation, characterizing non-financial factors as intangibles, which are hard to enter into a valuation model such as a Discounted Cash Flow (DCF) model.205 Although as much as one-third of portfolio managers’ investment decisions are based on intangibles, little attention has been devoted to linking such intangibles to the CSR agenda in the investor community. Intangibles such as reputation, trust and capacity to innovate are all widely recognized as fundamentals of strong financial performance. These are at the same time connected to the CSR agenda.

The limited attention given to CSR related intangibles reflects a financial-centric view on valuing a company. The perpetuation of the financial-centric view of capital is explained in large measure by its simplicity and inertia. Its simplicity is that companies’ assets can be reduced to the bottom-line of financial performance. Underlying is the wisdom that financial capital rises above all other forms of capital as the key to an organization’s value. While this may be true in the terminology of the contemporary world of finance, it is only partially true when investing in a sustainable company.206

Analyzing these issues, the problem boils down to investors mainly valuing what is financially

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204 (Business for Social Responsibility 2008, June 25)
206 (Hummels 2005, September)
material or proven management practices they know turn out beneficial, whereas companies see more value creation by working proactively with CSR - value that is neither realized in the financial performance nor as shareholder value. Taking Denmark as an example, a 2008 survey from Prospect shows that 80% of Danish listed companies wish that analysts integrate CSR when valuing the company while 20% of analysts do take CSR reporting into account. Likewise companies believe to a greater extent than analysts, that CSR contributes positively to value creation and that CSR reporting will gain more influence in the valuation of a company in the future.\(^{207}\) Hence, the aim for companies has become to find ways in which to make investors consider the presently unrealized value, hereby gaining larger market capitalization.

Illustrating the problem, the perception of company value by company managers consists mostly of value that can be linked to financial performance. Additionally, there is also a part of the value that is either intangible or ‘hidden’ as it does not show up in the financial statements of the company. All things being equal, excluding other factors that influence company value, this ‘hidden’ part of the value is the part of the company’s CSR initiatives that cannot be directly linked to financial performance because it is often long-term by nature. However, it can create value to the company in terms of enhancing license to operate or legitimacy, and ensuring innovation in order to capture unmet business needs in the long run, resulting in increased shareholder value. Thus, the identified problem at hand is, assuming that all other factors contributing to company value are kept equal, that all CSR related initiatives are not factored in when the investor community values the company. Hence there is an obvious mismatch between the value CSR is contributing to the value of a company, as perceived by the company working proactively with CSR, and the value realized by investors and analysts.

\[\text{Company value} = \text{Hidden value} + \text{Value as perceived by the company} + \text{Value as perceived by the investors}\]

\(^{207}\) (Munch-Jensen September 2008)
The identified problem is illustrated above as a dynamic model where new CSR issues are added into the company value from the top such as on-going issues related to climate change. This does not mean that the overall company value will increase. Instead, as more and more companies address a given issue it eventually becomes an integrated part of the company’s business processes and systems. This support the previous discussion on business’ role in society, as CSR is a dynamic concept that changes its shape and meaning as new issues appear in the public debate leading to new demands from society, regulation and introduction of minimum standards.

6.5 Conclusion Analysis 1
Based on the previous analysis of CSR trends and drivers and examination of the business case for CSR from a company as well as an investor perspective, it was found that companies to a much larger extent see the value of engaging in CSR initiatives. Mainstream investors are believed to have recognized the importance of social responsibility, but fail to fully integrate ESG factors into their investment decisions due to time constraints and lack of comparable data. The two contradicting parties have very clear definitions of the embedded problems and propose solutions that are logical to their own objectives. As illustrated in the problem there is a clear mismatch between listed companies on one side, and on the other side analysts and investors’ perception of the importance of integrating CSR into the investment decision-making process.

Based on the analysis we hereby confirm the initial assumption, that companies and investors perceive the value of CSR differently. The following analysis will lead us to investigate theoretically why this may be the case.

7.0 Analysis 2: Theoretical Analysis
Having empirically concluded, that there is a difference between companies and investors in the perceived value of CSR, we will now use theory to describe how CSR can contribute to the value of a company and why that value may be perceived differently by companies and investors.

There are only limited established theories within this field as illustrated in the literature review thus the following analysis will be based upon theoretical discussions rather than well established theories. From the previous analysis, we see two lines of arguments, which will be analyzed into detail in the following two sections. The first line of argument is that strategic CSR leads to competitive advantage, which then can give superior value. The second argument is that there might be value due to CSR within the company that is not realized financially as this ‘hidden value’ cannot be captured by existing financial models. This argument is investigated further in a discussion where novel ideas are taken into consideration.
7.1 Linking CSR to Competitive Advantage
The theoretical analysis of the link between CSR and competitive advantage will build on the findings from the first empirical analysis of how companies value CSR. The purpose of this section is to investigate theoretically how CSR can be linked to competitiveness and thus create as much value as possible, allowing the company to benefit from the business case identified in analysis one. This will be done by applying Porter & Kramer’s theoretical framework from 2006.

As found in the literature review, the wide public traditionally viewed CSR as a deed of benevolence and an add-on task to companies’ core business processes. This means that CSR initiatives were, and still are, for some large companies and most small and medium-sized enterprises, prioritized as a crisis management tool. This entails that a company only addresses ESG issues when brought to the attention of the public. This traditional ‘being forced to take action’ attitude is characterized as having a reactive approach to CSR.\(^{(208)}\) The main problem with taking on a reactive approach from an economic perspective is that the cost of waiting to develop and implement positions, systems and processes is significantly higher when the issue has occurred with the likely risk of turning into a scandal. This rationale was confirmed in analysis one, which found that more and more companies find it important to report on their CSR activities. Overall, this points to the fact that the role of business in society has changed considerably from companies focusing on complying the law and avoiding huge public scandals, to addressing new societal issues such as climate change and lack of resources. Companies thus start to embrace the opportunity element rather than pure risk minimization. However, one of the clear effects of the massive pressure on companies to respond and report on CSR is that many reports are lacking value-creating content as they do not focus on strategic approaches but more often on ‘cosmetic’ approaches to CSR. The result is public relations or media campaigns, and glossy CSR reports telling a story that is isolate from the corporate strategy.\(^{(209)}\) In order to avoid having a fragmented approach to CSR, Porter & Kramer propose that companies distinguish between objectives identified as CSR related or rather related to human resources (HR), marketing activities or a public relation (PR) activity. To aim for high brand value and to preserve a company’s reputation is for instance a task for the HR or marketing department and not a core CSR activity. Oppsite, to address emerging issues such as climate change and lack of resources, and thereby benefitting the company’s license to operate, is defined as being CSR related actions.\(^{(210)}\) When a company acts as a good citizen and mitigates adverse or anticipated harm from its value chain activities, it engages in responsive CSR, which is a good starting point according to Porter & Kramer but for

\(^{(208)}\) (Mirvis 2009)
\(^{(209)}\) (Porter, Kramer 2006)
\(^{(210)}\) (Porter, Kramer 2006, Galbreath 2008)
the company to really benefit optimally from CSR it should embrace the strategic approach to
CSR.\textsuperscript{211}

As demonstrated in the business case for CSR from a company perspective, CSR can allow
the company to reduce costs through operational, manufacturing and workforce efficiencies that are
measured in the company’s financial performance. Secondly, being able to adapt to changes and
to create new growth opportunities can eventually be linked to higher shareholder value. In
addition, CSR can help the company reduce financial risk and to obtain a strong license to operate
that reflects legitimacy and creditability from stakeholders and the overall society, which ensures
shareholders’ wealth. If the company is capable of engaging in the above-mentioned CSR
activities, CSR can result in higher profitability and competitiveness in the long run, while benefiting
the overall society. The focus point of the company’s CSR initiatives should be where the interests
of the society overlap with the strategic objectives of the company.\textsuperscript{212} Where both parties, the
society and the company, will obtain value is where shared value exists according to Porter &
Kramer. Making value creation more manageable in an investor context, the concept can be
divided into two levels; strategic CSR and operational CSR. Strategic CSR refers to understanding
and working to address societal and environmental challenges in a way that can create competitive
advantage. An example is to provide better living standards for employees in developing countries.
This might have the following derived effects; that the employees are healthier and hence more
efficient and have less absent days during a year than otherwise; it is easier to attract new
employees; it creates goodwill and legitimacy towards local municipalities, enlarging the license to
operate; and, by summing of them all, that the company might be able to survive in the long-term.
All these effects are only derivatives and thus it can be hard to value. Operational CSR is more
tangible by nature and easier to identify as actions that lead to higher profitability such as efficiency
improvements.\textsuperscript{213}

In practice companies can choose which societal issues to focus their CSR work on using ‘outside-
in linkages’, and ensure that the business’ activities do not have harmful effects on society in form
of ‘in-side out linkages’. The company can convert demands from society into CSR opportunities
by assessing the impact of the demand on the company’s competitive context, which is constituted
by the Diamond’s four dimensions.\textsuperscript{214} On a daily basis, companies are asked to address hundreds
of social or environmental issues, but only a few represent an opportunity to make a difference as
a company and create competitive advantage. Empirically, it was seen that augmented reporting is

\textsuperscript{211} (Porter, Kramer 2006)
\textsuperscript{212} (Porter, Kramer 2006)
\textsuperscript{213} (Sherman 2003)
\textsuperscript{214} Appendix 14 – Porter’s Diamond
a result of society’s increasing demands for companies to address arising issues. Climate change is a clear example of an ‘outside-in linkage’\textsuperscript{215}, as companies can strengthen their competitive context by making their carbon emissions explicit via reporting to the CDP. Thus, being proactive and striving to integrate relevant ESG issues into core strategy will separate the company from its competitors thereby creating a competitive advantage, while benefitting society. Opposite, having a systematic approach to how the company’s business activities affect the society both negatively and positively, called ‘inside-out linkages’\textsuperscript{216}, can help the company mitigate risk or anticipate harm. As seen in the empirical analysis, the many recently introduced management standards seek to mitigate the negative effects the company can have on society. In addition, as seen in the description of drivers of CSR, sustainability recognitions reward companies that have a beneficial impact on society in the way they operate.

In order to ensure a systematic and continuous approach, the company can develop and implement management procedures and set-up planning tools to ensure that new risk issues are met in the best possible manner, and opportunities are embraced. KPIs are a useful planning tool for doing this, as they measure and document the CSR impact that is essential to drive the CSR activities internally in the company.\textsuperscript{217} Moreover, Porter & Kramer argue that CSR activities should be managed as a core business issue and the company’s engagement and efforts should be communicated externally to financial markets though systematic reporting.\textsuperscript{218} As seen in analysis one, companies have started to report on their CSR activities, but the use of forward-looking explicit CSR related performance targets is an exception rather than a prerequisite.\textsuperscript{219} This means that CSR reports often miss out on why it makes good business sense to engage in various CSR initiatives and to measure its impact on the business strategy. Therefore, it becomes difficult for companies to communicate the measured value of its CSR-driven business initiatives to stakeholders, especially to investors. As also found empirically, the reason is that institutional investors are not demanding specific information on ESG issues in addition to traditional financial information.\textsuperscript{220} According to Porter & Kramer (2006), successful companies take into account how key issues will evolve over a long time frame in order to be capable of moving ahead of regulation and influencing the public agenda. It is vital that the CSR strategy is supported on management level and that the company makes an effort in incorporating it into core strategy, organization and culture.\textsuperscript{221} Thus, Porter & Kramer confirm that companies need to have systems or processes in place to work strategically with CSR. The trend speaks its own language as argued in analysis

\textsuperscript{215} See figure 3 on p. 29
\textsuperscript{216} See figure 4 on p. 30
\textsuperscript{217} (Porter, Kramer 2006)
\textsuperscript{218} (Porter, Kramer 2006)
\textsuperscript{219} (Bartels 2008)
\textsuperscript{220} (Mirvis 2009)
\textsuperscript{221} (Mirvis 2009)
one; three-quarters of Global Fortune 250 companies have a corporate responsibility strategy that includes defined objectives, and more than half of the world’s largest 250 companies publicly disclose business growth opportunities and address the financial value of corporate responsibility. This demonstrates that companies are slowly starting to move away from ‘closing loopholes’ and taking on a responsive approach to CSR, towards doing business in a manner that secure long-term economic performance, namely strategic CSR.222

Drawing on these findings we argue that companies can be placed along a curve in a diagram of value and CSR initiatives. Firstly, when a company engages in CSR it will often be in terms of acting as a good corporate citizen. Corporate citizen initiatives undertaken are according to Porter & Kramer necessary for the mere existence for, and acceptance of the company in the location in which it operates. As Porter & Kramer’s framework is rooted in a US context we argue that good citizenship may not be such an explicit a factor in Europe. It was seen in the literature review that European corporate engagement in social initiatives and perception of CSR is more focused on operating the core business in a socially responsible way, complemented by investment in communities for solid business case reasons.223 However, the initial responsive CSR initiatives related to corporate citizenship will then often have no valuable effect on society, which is illustrated in the diagram below as the curve starts out flat. As the company undertakes more CSR initiatives it will, in accordance with Porter & Kramer, start mitigating harm from the value chain. This must indicate that the company inherently has harmful effects on its surroundings. Consequently, the curve starts out below zero and then moves upwards, as the company becomes more and more skilled in mitigating damage from value chain activities, and starts to convert these activities to benefit society. In this way the company’s strategy is reinforced and the company begins to create value from its CSR work. Lastly, when the company, to an increased degree invests in CSR activities within its competitive context, the company moves to the highest point of the curve where value creation is greatest. At this point of the curve the marginal benefits of further CSR initiatives are significantly harder to identify and derive value from for the company, than the same amount of improvement done by a company in the negative end of the graph.224

To sum up, companies that work strategically with CSR are situated furthermost to the right on the graph whereas the ones working with CSR on a responsive basis are situated on the left hand side of the scale. Looking at the companies in each end of the curve and not the companies that are situated in between, presumably the majority of large companies, there are significant differences in the scope of CSR for these companies. As the companies in the poor end of the scale work with CSR only in order to mitigate risk, the companies in the top end of the scale approach CSR in

222 (Porter, Kramer 2006)
223 (Garriga, Melé 2004)
224 The shape of the curve was supported by an interviewee, see Appendix 23 – Investor Interview 7
order to obtain and embrace opportunities. However, there will always be risk minimization involved as well in a strategic approach. As the companies that work strategically with CSR generate the highest value we believe that this group of companies are most likely creating value stemming from CSR that is not realized by investors. As we saw in chapter five, Novozymes has a strategic approach to CSR. Accordingly, we argue that Novozymes is situated furthermost to the right in the curve, as the company works proactively with CSR and seeks to embrace opportunities.

In conclusion, investigating the empirical findings from analysis one, it was theoretically shown that companies taking a long-term strategic view use CSR activities to anticipate risks and create opportunities from emerging ESG issues in the markets where they operate. A long-term strategic approach evolves through addressing key issues facing the industry, engaging key stakeholders, aligning the CSR activities with core business strategy, as well as defining targets and thereby leveraging on company’s core assets. The business case from analysis one, stating that companies can benefit from CSR in the form of higher profitability and competitiveness, can be realized if companies take a long-term strategic approach to CSR, unlike a responsive CSR approach where short-termed risk minimization is the only focal point. Thus the finding from analysis one that CSR is ascribed increasingly higher importance, which means that the business case for CSR likewise is becoming clear and favorable for companies that work strategically with CSR, is supported theoretically by Porter & Kramer. In addition, we argued that companies that take a strategic approach to CSR are situated furthermost to the right on the curve, showing value versus CSR work, whereas companies that work with CSR in a responsive manner are situated in the beginning of the curve. The companies that can be situated on the highest point of the curve are the ones that create value that currently are ‘hidden’ for mainstream investors.
7.2 CSR and Economic Performance – Hidden Value

As described earlier, this second part of the theoretical analysis revolves around the second line of argument that focuses on CSR and economic performance. As argued in the problem identification there might be value due to CSR within the company, which may not be realized as it is currently ‘hidden’ to investors albeit not to managers of the company. Why this value is ‘hidden’ to investors is what we intend to investigate in this section using contemporary theories.

The analysis of the ‘hidden value’ will be accomplished by applying Schaltegger’s (2006) theory on the ‘relationship between CSR performance and economic success’ to the empirical findings from the business case for investors. This will spur a theoretical discussion about how investors make decisions, which will be supported by inputs from Renneboog et al. (2008). This will enable us to answer our second sub-question of the research statement: “Why is social responsibility currently valued differently by companies and investors?” Then, we will provide an argument, that there is a need for a new, integrated decision model that includes CSR to a greater extent when evaluating company value. Lastly, the idea of a new model is further explored in a discussion where the argument finds support among several theorists and hence provides an outlook for social responsibility in an investor perspective.

7.2.1 The Relationship between CSR and Economic Performance

It was recognized in the empirical analysis that the business case for CSR from an investor perspective is not as clear as from a company perspective. This finding had international support, and statistics from Denmark spoke their own clear language.225 Linking this empirical finding to the theory of Schaltegger (2006) the view of ‘mainstream financial investors’ can to an extent be categorized as a ‘traditionalists view’. The traditionalists believe that increasing CSR performance will lead to nothing but increased costs and therefore deteriorate economic performance, which is shown by the monotonously decreasing curve in the figure below. The figure mirrors the mindsets of different investors’ perception of the relationship between CSR performance and economic success.

225 (Munch-Jensen September 2008)
It is assumed that investors behave rationally, and only invest if they believe it will be economically beneficial to make the investment. Hence, by not considering any ESG factors at all, ‘mainstream financial investors’ do not believe that any kind of CSR performance will be able to provide a more valuable investment. The fact that increased CSR performance is detrimental to the economic performance of the company is not necessarily true, as the empirical findings do not conclude anything on whether companies that invest heavily in CSR are actually rejected as investment opportunities by ‘mainstream financial investors’. Hence, it will be more correct to illustrate ‘mainstream financial investors’ as a straight line in the figure above, as CSR has neither a negative nor a positive influence on economic performance, as it is not considered.

Many mainstream investors do however consider ESG factors albeit to a limited extent. These are categorized as ‘mainstream SRI investors’. See figure 10 for a categorization of the three groups of investors. It was found empirically that most investors have recognized the importance of companies acting socially responsible and hence favor companies that perform well on their CSR performance. The investors have understood that these companies might be more valuable investments, and hence invest in them. It is important to consider that some investments may not only be based on the fact that the company is believed to be a better investment because it acts socially responsible, but because the investors themselves want to be known and branded as socially responsible, and hence, make these investments to attract customers.

However, as emphasized in the empirical analysis, mainstream investors do not yet have material proof that investing socially responsible is valuable and thus the investors are hesitant to make these investment decisions. The ‘mainstream SRI investors’ can therefore be placed in between the ‘traditionalists view’ and the ‘revisionist view’. They are currently closer to the ‘traditionalist

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226 (Schaltegger, Wagner 2006)
227 (Business for Social Responsibility 2008, June 25)
view’ but moving upwards (as indicated by the dashed, curved line) the more CSR is considered in the investment decision. ‘Core SRI investors’ can be characterized as having a ‘revisionists view’ together with the companies working strategically with CSR, as they all share the perception that engaging in CSR is economically beneficial when done in a strategic way.

The understanding of how the different investors view the relationship between CSR performance and economic success will be used to generalize the way they make investment decisions. In the following, investors will be characterized using two identified investment decision models, which will help in understanding why companies and investors perceive the value of CSR differently.

### 7.2.2 Single and Dual Investment Decision Models

In the empirical findings it was concluded that best practice for investors to incorporate CSR is to make SRIs, as the particularity of SRI is that both social and financial objectives are pursued. Both the view of mainstream SRI investors and core SRI investors were depicted in figure 13 in the previous paragraph, and they both viewed increased CSR performance as value-creating to an extent. As ‘mainstream SRI investors’ constitute the largest part of the SRI investors namely 80.8% of total SRI in Europe, and are among the ones that see the biggest problems in integrating CSR into their investment decisions, we will focus on ‘mainstream SRI investors’ in the following.

By investigating the SRI practices empirically, it was clear that the most used practices were those of negative and positive screening, as well as shareholder activism. Looking at these SRI practices, screenings are merely ways of selecting stocks, whereas shareholder activism and divestment are means to improve the company’s performance or the investors’ situation. Hence, we argue that investors that incorporate SRI practices when investing make use of a ‘dual decision model’, as it both entails a socially responsible element and a financial analysis.

The socially responsible element entails that stocks are selected due to ESG criteria, or actions are taken to improve the CSR performance of the company. In a traditional financial analysis a valuation is conducted and the stocks expected to give the highest return for a given risk are selected. Accordingly, investing socially responsible is a combination of evaluating ESG criteria as well as a financial analysis. The two decisions are taken separately, one after the other. Contrarily, investors that only use financial data when making investments can be characterized as applying a ‘single decision model’ as they only value on financial criteria.

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228 (Renneboog, Ter Horst & Zhang 2008)
229 €2.15 trillion broad SRI/€2.67 trillion SRI = 80.5% (European Social Investment Forum 2008)
230 (European Social Investment Forum 2008, Bengtsson 2008)
In the dual decision model the decisions are sequential beginning with firstly considering the intangible ESG information, and secondly undertaking a financial analysis. The financial analysis also considers diversification effects, because limiting the investment universe will naturally limit the diversification possibilities as the number of possible stocks to invest in has decreased. Using a screening method on any of the ESG factors naturally entails limiting the investment universe.

In order to address further why investment decisions can vary among different kinds of investors, a table by Renneboog et al (2008) is useful. It describes the portfolio management of SRI funds and conventional funds, which is equivalent to our definition of ‘mainstream financial investors’. The SRI funds are not further defined, hence, it is initially assumed that this must include all SRI funds including both ‘mainstream SRIs’ and ‘core SRIs’. The table below shows the portfolio management of conventional funds and SRI funds and how each parameter of financial data and CSR is weighed.

<table>
<thead>
<tr>
<th>Companies</th>
<th>Positive NPV</th>
<th>Negative NPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive CSR</td>
<td>(A) both SRI and conventional funds invest</td>
<td>(C) only SRI funds with positive screens invest</td>
</tr>
<tr>
<td>Negative CSR</td>
<td>(B) only conventional funds invest</td>
<td>(D) neither conventional nor SRI funds invest</td>
</tr>
</tbody>
</table>

Figure 14: Illustration of the factors included in the single and dual decision models. Source: Own model.

Figure 15: The investment universe. The stocks the SRI investors can invest in are fewer than for investors not including ESG information in their investment decision. The inner circle can vary in size according to the screening criteria set up by the investor. Source: Own model.

Figure 16: Table categorizing SRI funds and conventional funds according to the considerations of net present value (NPV) and CSR. Source: Renneboog et al. (2007)231

231 (Renneboog, Ter Horst & Zhang 2008)
The table shows that SRI funds are willing to sub-optimize on the financial performance of the company as SRI funds care more about companies’ CSR initiatives than financial performance (C). The market, if efficient, will then lead to SRI funds underperforming conventional funds, as SRI funds forego the possibility to invest in company (B) and overinvest in companies like (C). Nonetheless, empirical studies only point to, but do not unequivocally demonstrate, that SRI funds are willing to sub-optimize financial performance in the pursuit of social objectives. This means that SRI funds may not invest in companies like (C) in the table where the financial performance is not satisfactory.

We believe the intriguing question is related to the time horizon. When the investment is supposed to obtain a positive NPV depends on the specific fund, as some SRI funds have a much longer time horizon than conventional funds. This means the SRI funds may consider themselves to be investing only in companies with positive NPV. SRI funds act in the belief that they have selected superior stocks due to the screening process, giving the investment a positive NPV although on a longer time horizon. This would mean that company (C) in the table has long-term positive NPV, and thus actually should be categorized as (A).

Renneboog et al. (2008) operate with a hypothesis claiming that SRI funds can outperform the market in the long-term. If that is the case, that would entail that the SRI screening process generates value-creating information, which would otherwise not be available to investors. The two supporting arguments for this ‘out-performance hypothesis’ are firstly, that sound social and environmental performance can often be an indicator of good managerial quality, possibly leading to favorable financial performance and, secondly, that the screening process reduces the possibility of incurring high cost during social crises or environmental disasters, which financial markets tend to undervalue. But if screenings actually do generate value relevant information, conventional portfolio managers should be able to replicate the screens and get the same performance. Thus, the ‘out-performance hypothesis’, arguing that SRI funds can outperform conventional funds, is at odds with the efficient market hypothesis.

A possible reason for why SRI funds may be able to outperform the conventional funds in the long-run is that SRI funds have developed elaborated screening strategies, which are currently not replicated by the rest of the market. In investigating this discrepancy further, we believe that it is necessary to take a closer look at the wide-ranging term of ‘SRI’, and hence distinguish between ‘core SRI’ and ‘mainstream SRI’. The problem can be that it may only be ‘core SRIs’ that are able to outperform the market and hence far from all investments termed ‘SRIs’, which also contains ‘mainstream SRI investors’. What seems to be the problem is that even though there is full and

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232 (Renneboog, Ter Horst & Zhang 2008)
233 (Renneboog, Ter Horst & Zhang 2008)
free information flow, which should lead to an efficient market, the largest part of the investors constituting the market does not use ESG information on social responsibility for anything, and ‘mainstream SRI investors’ only use the information to a limited extent. This may indicate that the SRI practices used by ‘mainstream SRI investors’ may not be sufficiently capable of extracting value-creating information because if they were, all investors would use them. Looking at figure 11, ‘mainstream financial investors’ and ‘mainstream SRI investors’ administer 96.6% of all European assets under management. If this large part of investors does not consider ESG data in a sufficient way, there is a possibility that ‘core SRI’ funds is capable of outperforming the market in the long-run.

Thus, we argue, that the dual decision model, as used by ‘mainstream SRI investors’, is not sufficiently capable of capturing the value created by CSR as the screening methods are not sophisticated enough. The reason these ‘mainstream SRI investors’ have not fully surrendered to a more elaborated ESG analysis, as used by ‘core SRI investors’, is that they do not see sufficient proof, as it was explained in the empirical analysis, that it is valuable to invest this way. Practices to estimate value from ESG are still a new phenomenon, which means that these methods are not common to the investor community in the same way as a financial valuation. Most investors are not used to handling CSR information and it may require great resources and skills to extract value-creating information. This means there is a lack of methods to take ESG methods into account. Here it is assumed that if a method to measure value from CSR had been developed and validated, the investors would most likely use it by now, as we saw in the business case for CSR from an investor perspective, the investors do believe CSR is important. Hence we conclude that there currently is a lack of methods to include ESG data into investment decision-making that is widely accepted among mainstream investors.

7.3 Need for a New Model?
From the analysis thus far, it is clear that there is a need for a conceptual link between CSR and the influence it has on economic performance. A single and a dual decision model have been identified, although what seems to be needed is something that currently does not exist. The question becomes whether CSR should be sought quantifiable to be incorporated into existing financial models? Or whether an entirely new concept needs to be developed in order to capture the influence CSR undoubtedly has in order to correctly estimate shareholder value? The issue is to ask if CSR should be modified to fit existing financial models or if the financial models should only be one part of a new valuation model that integrates CSR equally to financial data?
Financial analysis has existed since the 1930s and therefore is the most established concept of the two, as CSR just in the last 10 years has become an increasingly significant parameter to company performance. Thus it will be logic to try to modify this new intangible concept to fit into the well-established financial theories. Nonetheless, the intangibleness of CSR, along with the importance given to CSR by the companies working strategically with CSR, makes it necessary to consider alternative ways to estimate the influence on economic performance. We suggest the existing financial models are reconsidered, so that a model capable of including the value of companies’ CSR activities can be developed. For this we suggest an ‘integrated decision model’ that, like the dual model explained earlier, considers both ESG data and financial data but, contrary to the dual model, makes the two decisions simultaneously.

![Integrated decision model](Figure 17: The integrated decision model. Source: Own model.)

We argue that the single decision model is not sufficient, as it does not consider ESG factors at all. On the other hand, the dual decision model is not adequate either, as currently CSR is evolving at a fast pace, and hence the economic performance of companies working strategically with CSR is largely influenced by the CSR work undertaken. This means that further integration of ESG factors is needed if the true value of companies working with strategic CSR is to be given. In order for this value to be acknowledged by the majority of investors a more convincing model is needed. An integrated decision model will have the advantage that it will allow for an analysis where both ESG factors and financial data are considered simultaneously, which is what seems to be needed when looking at the empirical findings earlier. Companies in general seem to have a higher perceived value of CSR than investors do, indicating that companies believe CSR creates value that is currently not realized by investors. However, an integrated decision model may not be a quantifiable model, which may pose a problem to investors. What this model actually looks like, what it entails and how it will function in practice remains unknown but in the following we find support for the idea that something radically new – possibly an integrated decision model - may be needed.

### 7.4 Discussion

The discussion will firstly present an argument supporting an integrated decision model. Secondly, we take a closer look at the indicators of what a new model may consist of, namely that it should be an integrated decision model albeit not based on existing financial analysis, and integrated and pursuing a single objective.

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The Next Frontier – a Matrix Model?

During an interview with Mr. Steve Lydenberg, Domini Social Investments, and Ms. Céline Louche, Vlerick Leuven Gent Management School, we found strong support for an integrated decision model. According to Mr. Lydenberg and Ms. Louche, there are many great company reports on CSR but the problem is, there are no guidelines of how to read them. There are simply too many audiences and the different messages in terms of information in these reports are targeted towards too many stakeholders. Consequently, more detailed information is needed, targeted specifically to each stakeholder, in order for the reporting to be valuable. One of the stakeholders is the investors, and for them to understand and believe in CSR as a value component, something different than the current CSR reporting is needed.

Mr. Lydenberg has a thesis that CSR is very valuable, albeit intangible and hence he considers the next frontier within CSR reporting to include a ‘matrix’ for returns that are not financial. He argues that a new vocabulary is needed of words and not numbers, as he sees a tension between integrating ESG into valuation and developing something new. When elaborating on the matrix model, Mr. Lydenberg and Ms. Louche describe many challenges to integrating economic performance and CSR. Nonetheless, it is clear that the matrix model is based on a thought of integrating financial analysis and ESG data in order to obtain a full picture of the company in question, similar to the integrated decision model described earlier.

Both Mr. Lydenberg and Ms. Louche believe investors will increasingly have to consider ESG factors in their investment decisions. There is a lot of attention on this in the investment community and financial reports are already being influenced by ESG data, and the UNPRI initiative raises the awareness of these factors. However, whether the ESG data will be integrated is uncertain. Mr. Lydenberg and Ms. Louche argue that it is likely that ESG factors may become a part of an existing valuation model, and hence squeezed in, as investors do not question the short-term horizon. Only if investors are truly long-term oriented can the two separate functions be combined.

In general, investors are paying more attention to negative externalities, meaning they focus on risk. Mr. Lydenberg argues that investors, especially social investors, should pay more attention to opportunities as it is valuable to keep an eye on externalities even though it cannot be linked to profits this year. According to Mr. Lydenberg “the ultimate argument is that all investors should be [thinking] long-term and they should be taking these externalities into account”. In the short-term, value always comes at someone else’s expense whereas long-term value benefits all.

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235 Appendix 6 – Expert Interview: Steve Lydenberg & Céline Louche, and Appendix 7 – Notes from Lunch-Meeting
236 Appendix 6 – Expert Interview: Steve Lydenberg & Céline Louche, and Appendix 7 – Notes from Lunch-Meeting
On the contrary, a crucial question about externalities argues in favor of a split between business financials and the value a company contributes to society. The split is required, according to Mr. Lydenberg, due to the long-term nature of externalities and the short-termism prevailing among investors to seek quick profits. Internalizing externalities will as a result make them short-term, which could turn out detrimental for the externality. Consequently the company should report on both issues. However, Ms. Louche argues that taking externalities into account does not have to be a contradiction to a matrix model. In an ideal world, the investment universe should be predefined according to the long-term and then the analysis can be carried out according to the short-term also.

To sum up, a matrix model, that also considers non-financials such as externalities would be the optimal way to consider CSR, however many challenges to such a model remains unsolved.

**Integrated Method - not based on Traditional Financial Analysis**

In the literature review several theorists argued that CSR increases financial performance or contributes to increased shareholder value. However there are only few attempts made to actually conceptually link CSR and economic performance in theory. As argued in the problem identification, investors value what is financially material. Thus a linkage between CSR and economic performance is indeed required in order to make mainstream investors pay more attention to the potential value of CSR.

In the following we find two attempts to integrate ESG data into traditional financial analysis. We argue that the two models are clear signs that an integrated model is needed, however none of them are sufficiently adequate.

Chousa & Castro (2006) have developed a three dimensional model to focus on the financial and non-financial benefits of social and environmental activities with the objective to provide useful insights to investors when selecting stocks. The basis for the model is to use existing financial tools as these are already recognized as tools to assess a company’s performance and hence a model based on the well-known DuPont ratio decomposition system is developed. The model seeks to identify the sources of strength and weaknesses of company performance although it is based on accounting information, which means evaluating past performance. However, in this model, the ratio decomposition turns out to be a very complex system where some rather basic ratios on environmental and social issues are calculated and are expected to influence the financial performance of the company. The complexity may reflect reality well, but the great weakness of the model is that it has not yet been tested empirically or validated through the

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238 (Chousa, Castro 2006)
239 (Ravn Elkjaer, Hjulsager 2004) For a visual illustration see Appendix 15 – Ratio Decomposition in the Financial Analysis of Sustainability
application of artificial intelligence all though the authors believe it would be possible. This would entail refinement of the model which is needed. 240 Moreover, having a model based on past accounting figures is of little help in determining the company's future success. The backward looking approach is especially questionable for new issues such as environmental changes because effects of these will not find their way into a valuation until it is a part of the company's past history. 241 Overall, it is a very complex, untested and vague model.

Another framework seeking to integrate environmental and financial analysis is developed by Schaltegger & Figge (1997). 242 The focus of the framework is to bring environmental impact into company valuation, by using the concept of shareholder value as developed by Rappaport (1986). 243 In an extended edition of Schaltegger & Figge's work Schaltegger (2006) has developed a model that links sustainability management and shareholder value. 244 Schaltegger argues that environmental and social management influence the management decisions within strategy, investment, operations and financing, which target the economic levers. These economic levers influence both the value drivers of shareholder value and the competitiveness of the company (which also indirectly influences the value drivers) simultaneously, which in turn influences shareholder value. 245

Compared to the previous model, shareholder value has the advantage of being based upon the sustainable increase in shareholder value, which is future-oriented as a contrast to looking backwards. This method allows both risks and income related to environmental issues to be considered. Another advantage of this approach is that the cash flow data cannot be manipulated by accounting practices. A disadvantage is that the future cash flows and discount rate are influenced by expectations of investors and management, and if they do not recognize current environmental issues that may influence future company development calculations will not show the actual shareholder value. Moreover, any detailed or systematic methodology is not given to show how it should actually be done in practice.

In the first model presented above the accounting perspective was very detailed, compared to the second model, which is not very systematic in how to integrate ESG factors into the framework. Nonetheless they both seek to incorporate ESG factors into existing financial frameworks. These are indicators that an integrative approach to linking ESG factors and economic performance is needed however none of two methods have proven sufficiently successful in practice. As these two

240 (Chousa, Castro 2006)
241 (Schaltegger, Figge 1997)
242 (Schaltegger, Figge 1997)
243 (Rappaport 1986)
244 (Schaltegger 2006) Shareholder value = Σ_{n=1}^∞ (Free Cash Flow_n/(1+i)^n) – Borrowed Capital
245 For a visual illustration see Appendix 16 - Linking Sustainability Management and Shareholder Value
models are the most comprehensive theoretical frameworks found, we argue that integrating ESG factors into existing financial models is not the optimal way of integration.

**Integrated Method with a Single Objective**

We argue that an integrated decision model is needed, which naturally will evaluate company performance on a single, integrated measure, as opposed to the dual model that evaluates on two separate parameters. In the following we find support for this reasoning.

Jensen (2001)\textsuperscript{246} has developed an argument to overcome the often opposite directed conceptions of stakeholder theory and value maximization. He argues, “*since it is logically impossible to maximize in more than one dimension, purposeful behavior requires a single valued objective function*.\textsuperscript{247} Accordingly, Jensen argues that enlightened value maximization, which aims to maximize the long-term value of the firm, while still using much of the structure of stakeholder theory, is the best method to make the required trade-offs among stakeholders. As a consequence, there is only one corporate objective function, which makes it easier to track if the company is doing better or worse.

The thought of having only one objective function or scoreboard can be compared to the dual and integrated decision models identified earlier. Having more objectives - such as the dual decision model that considers both ESG data and financial data separately - leads to confusion about how to make decisions. Contrarily, a single objective prescribes how to make the necessary trade-offs as only one objective counts. This speaks in favor of having an integrated decision model. The single decision model is still not considered adequate, as it does not include the important element of CSR. Hence, only an integrated decision model is satisfactory. The theory is designed to be used by companies, but say these companies were investment companies, the scope of pursuing long-term value maximization still holds under the assumption of the ‘out-performance hypothesis’ as put forward by Renneboog et al. (2008), claiming that SRI funds outperform the market.

Summing up, logic decisions can only be taken when one single objective is pursued, which favors the argument of an integrated decision model.

Based on these four arguments, we argue that here is need for an integrated decision model, possibly some kind of matrix model. The model should be integrated, but should not be based on existing financial analytical models, as these have not proven sufficient. It further supports the integrated decision model that it is only possible to reasonably optimize on a single objective, as argued by Jensen (2001).

\textsuperscript{246} (Jensen 2001)  
\textsuperscript{247} (Jensen 2001)
7.5 Conclusion Analysis 2
The previous analysis sought to answer the second sub-question: "Why is the value of CSR perceived differently by companies and investors?" Firstly, an analysis of how value-creating CSR emerges in a company perspective found that companies that take a long-term strategic approach to CSR can generate value in the form of higher profitability and license to operate, which can result in increased competitiveness. A long-term strategic CSR approach evolves firstly through addressing issues that emerges in society which, when addressed, is valuable to both the company and society. Secondly, it evolves through engaging key stakeholders and addresses the effects the company has on society. Moreover the CSR activities must be aligned with core business strategy, as well as having defined targets. The empirical findings from analysis one showed that CSR is ascribed increasingly higher importance by companies, meaning that the business case for CSR is becoming favorable for companies, is supported theoretically by Porter & Kramer.

Subsequently, the second line of argument that focuses on CSR and economic performance was investigated. It was found that SRI investors have a positive view on the relationship between CSR performance and economic success, with ‘core SRI investors’ having the most positive view. This of course influences the investors’ investment decisions where only ‘core SRI investors’ and ‘mainstream SRI investors’ investors consider ESG data in their investment decision. Accordingly, two investment decisions models were identified where only the dual decision model factors in ESG data. This dual decision model is used by both ‘mainstream SRI investors’ and ‘core SRI investors’, however, ‘core SRI investors’ have more elaborated screening methods and therefore we argue that it is possible that they may be able to outperform the market. This means that ‘mainstream SRI investors’ do not have an adequate screening method available, which is why CSR is valued differently both among investors and particularly when comparing companies’ and investors’ perceptions of CSR. A company evaluation method to better capture value from CSR is needed. Therefore, an integrated model was proposed, that factors in both financial and ESG factors simultaneously. Whether an integrated decision model should be developed by squeezing ESG factors into an existing valuation model, or if a new model including ESG factors should be built, was addressed in a discussion of emerging ideas. These ideas support our statement; that there is a need for a new integrated decision model, which cannot be developed from existing financial models.

8.0 Analysis 3 – Case Study: Findings from Interviews
The purpose of the following analysis is to provide an answer to the third sub-question: “How do Novozymes’ investors value ESG data in a valuation of Novozymes?” The findings from the interviews with Novozymes’ analysts and investors regarding their use of ESG data will be analyzed. On the basis of the analysis recommendations will be given to Novozymes on how to
improve their communication of CSR to this group of stakeholders. Initially, this section will start with a definition of the interviewees, their objectives, time horizon, as well as their clients’ demands to the investment analysis. Then, the three identified investment decision models from analysis two will be applied on the 9 interviews with Novozymes’ investors and analysts. The purpose is to test our theoretical findings on a real case. Subsequently, an analysis of the findings from the interviews will be undertaken, discussing the different ESG evaluation methods used, the internal set-up of investment houses, application of indices, drivers of ESG integration, followed by a discussion of the future outlook for the investor community to include ESG factors.

8.1 Categorization of Interviewees
To obtain a diversified set of data institutional investors, sell-side analysts as well as buy-side analysts were interviewed. The geographical distribution of shareholders in Novozymes is allocated as; Denmark 56%, rest of Europe 20%, North America 23% and Asia 1% of total share capital. Of the 56% shares owned by Danish shareholders, Novo A/S holds 11%, and 6% are held by Novozymes.248 We have aimed at having representatives from each geographical region in our data sample. The result is that 56% of the interviewees are Danish, while rest of Europe and North America constitute 22% each. Thus, the data sample corresponds well with the actual geographical distribution of shareholder, validating our conclusions about how the investors and analysts of Novozymes value their ESG performance.

When striving to understand what the investor community thinks about ESG factors and their relevance in an investment context, it is useful to map the different financial professionals and their objectives, which determine the investment purpose or philosophy, including their time horizon. As stated in the delimitation of this thesis’ scope, the focus is on mainstream institutional investors and financial analysts, and thereby not on private investors.

An institutional investor is an investor that pools large sums of money and invests professionally on behalf of others. Institutional investors include banks, insurance companies, pension funds, hedge funds and mutual funds.249 Institutional investors can be long-term oriented, which allows the financial analysts of an investment company to pick stocks according to other parameters than purely short-term financial criteria.

Financial analysts provide investors with basic information on particular securities, giving them the tools they need to estimate the attractiveness of certain investments. Financial analysts can be divided into two categories:250 (1) **Buy-side analysts** usually work for a pension fund or mutual

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249 Investopedia: [http://www.investorwords.com/2504/institutional_investor.html](http://www.investorwords.com/2504/institutional_investor.html) (08.07.09)
250 Investopedia: [http://www.investopedia.com/articles/basics/03/041703.asp](http://www.investopedia.com/articles/basics/03/041703.asp) (14.07.09)
fund company. Their recommendations are made exclusively for the company that employs them. Unlike sell-side recommendations, which are meant for the public, buy-side recommendations are not available to anyone outside the firm.251 (2) **Sell-side analysts** work for a brokerage or firm that manages individual accounts and make recommendations to the clients of the firm to help them make decisions to buy, sell, or hold stocks.252 As such, sell-side analysts do not decide themselves which stocks to monitor, they merely provide the research to the clients of the brokerage firm.253

The identities of the interviewed investors and analysts of Novozymes have been made anonymous and they will therefore be referred to as ‘analyst’ and ‘investor’. A simplified overview of the interviewees is shown below, indicating the nationality of the interviewees, their function, if they are signatory to ESG guidelines such as UNPRI and CDP, and if they consider ESG in their research and method. A summary of each interview can be found in appendices 17 to 25.

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251 (UNEP FI, WBCSD, Young Managers Team 2004)  
252 (UNEP FI, WBCSD, Young Managers Team 2004)  
253 Investopedia: [http://www.investopedia.com/articles/basics/03/041703.asp](http://www.investopedia.com/articles/basics/03/041703.asp) (14.07.09)
### Figure 18: Overview of interviewed investors and analysts and their characteristics. Source: Own model

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Function</th>
<th>Time horizon</th>
<th>Signatory</th>
<th>Inclining ESG</th>
<th>ESG Research</th>
<th>ESG method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interview 1</strong></td>
<td>USA</td>
<td>Sell-side Analyst</td>
<td>Short-term</td>
<td>None</td>
<td>None/ Governance Analytics</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 2</strong></td>
<td>France</td>
<td>Sell-side Analyst</td>
<td>Short-term</td>
<td>UNPRI</td>
<td>Yes/No questionnaire /GIM (Governance Metrics International)</td>
<td>None/in-house</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 3</strong></td>
<td>Denmark</td>
<td>Investor/ Fund-manager</td>
<td>None</td>
<td>(✓)</td>
<td>Thematic Fund</td>
<td>Industry related</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 4</strong></td>
<td>Denmark</td>
<td>Investor/ Buy-side Analyst</td>
<td>3 years</td>
<td>About to sign UNPRI</td>
<td>Bought from GES</td>
<td>Negative screening/ stakeholder activism</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 5</strong></td>
<td>Denmark</td>
<td>Investor/ Buy-side Analyst</td>
<td>3-5 years</td>
<td>UNPRI</td>
<td>Bought from GES</td>
<td>Negative screening</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 6</strong></td>
<td>Denmark</td>
<td>Investor</td>
<td>5 years</td>
<td>UNPRI, CDP</td>
<td>Bought from GES</td>
<td>Negative screening/ stakeholder activism</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 7</strong></td>
<td>Denmark</td>
<td>Investor</td>
<td>More than 10 years</td>
<td>UNPRI</td>
<td>In-house/ Bought from Eiris</td>
<td>Negative screening/ stakeholder activism</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 8</strong></td>
<td>Scotland</td>
<td>Investor/ Buy-side Analyst (Investment Management Firm)</td>
<td>3-5 years</td>
<td>UNPRI, CDP</td>
<td>Somewhat integrated</td>
<td>None/in-house</td>
<td></td>
</tr>
<tr>
<td><strong>Interview 9</strong></td>
<td>USA</td>
<td>Investor</td>
<td>Up to 40 years</td>
<td>UNPRI, CDP</td>
<td>In-house/ISS (Institutional Shareholder Services)</td>
<td>Integrate d method</td>
<td></td>
</tr>
</tbody>
</table>
The interviewed investors and analysts have been categorized according to how they consider ESG information in their investment decisions, using the three identified investment decision models from analysis one, namely the single, the dual and the integrated decision model. In the sample of Novozymes’ investors most interviewees are found to be ‘mainstream SRI investors’, two are characterized as ‘mainstream financial investors’, and two as ‘integrative investors’. As such, the majority of the financial professionals interviewed use the dual decision method where the financial analysis and the evaluation of the ESG factors are made sequential, one after the other. However, it is important to yet again emphasize that the category ‘Mainstream SRI’ investors include analysts and investors using up to two screening criteria when selecting stocks, as well as other forms of SRI initiatives such as simplified yes/no questions. This means that this category is very broad and encompasses mainstream investors or analysts that employ everything from very simplistic ESG tools to sophisticated screening methods. The figure below provides an overview of the interviewees and places them according to their level of ESG considerations.

<table>
<thead>
<tr>
<th>Level of ESG considerations:</th>
<th>None</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision model:</td>
<td>Single</td>
<td>Dual (financial decision)</td>
</tr>
<tr>
<td>Type of investor:</td>
<td>Mainstream financial investors</td>
<td>Mainstream SRI investors (separated financial and ESG evaluation)</td>
</tr>
<tr>
<td>Analyst 1</td>
<td>Analyst 3</td>
<td>Investor 4</td>
</tr>
<tr>
<td>Investor 2</td>
<td>Analyst 5</td>
<td>Investor 6</td>
</tr>
</tbody>
</table>

The categorization will be explained in the following analysis of the ESG methods used by the interviewed analysts and investors.

### 8.2 ESG Methods

In the following, the methods used to evaluate ESG factors will be analyzed according to each type of investor as indicated in the model above. Most attention will be given to ‘mainstream SRI investors’ as analysis one showed that the majority of SRI investors are categorized as ‘mainstream SRI investors’, as well as the majority of the interviewees belongs to this group. The

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255 Based on the definition used by Eurosif of 'Broad SRI' investors. (European Social Investment Forum 2008)

256 See figure 11, p. 53
group of investors is very interesting to Novozymes, not only due to the size of the group and accordingly large amount of assets under management, but also because they show interest in social responsibility, but only use fairly simple methods. Hence, having this group valuing ESG factors to a greater extent would presumably be valuable to Novozymes.

8.2.1 Mainstream Financial Investors

The findings from the interviews show that one of the sell-side analysts does not consider ESG factors in a valuation at all. This means that this analyst’s view on ESG performance can be illustrated as the straight line in Schaltegger’s graph from analysis two. Subsequently this analyst is applying the single decision model. The sell-side analyst operates with a short-term horizon, which only allows analyzing on one single objective, namely the best possible return on investment, thus the financial criteria. Raising the question if any consideration is given to ESG factors, the answer is clear: “No, none what so ever. It is a very straightforward financial based valuation.”257 According to the specific sell-side analyst, ESG factors can never be a part of a valuation as the actual identification of ESG parameters of the individual company is a lengthy and comprehensive process that requires time and extra resources in the form of competencies; two things that do not exist, and maybe never will evolve, in the investment universe of sell-side analysts. Instead, sell-side analysts focus on parameters that are comparable, transparent and realized today and not within a decade, as ESG related performance parameters often are.258 The sell-side analyst expresses this point in the following way: “I have no idea of how to get about it [ESG factors]. You have to identify parameters in order to make a valid comparison. You could add in CO₂ emissions, environmental damage […] For me to use it there has to be a defined set of parameters that are transparent and comparable.”259 Even though risk estimations are key elements in the sell-side analyst’s research, the analyst does not have a systematic way of factoring in accidents and its consequences related to ESG factors: “I’m aware of the NZ case in the US260, they very elegantly avoided mentioning it. How would you measure the impact of such an accident, to objectively define the impact?”261 Again, defined parameters that can estimate the impact of an issue are requested by the analyst, which is consistent to one of the main barriers towards ESG integration acknowledged in the empirical findings in analysis one.

257 Appendix 17 – Investor Interview 1
258 Appendix 17 – Investor Interview 1
259 Appendix 17 – Investor Interview 1
260 In 2005, there was a discharge of products and raw materials at Novozymes Biologicals Inc. in Salem, Virginia, USA. This resulted in contamination of a nearby creek. On December 18, 2008, the case was settled between Novozymes and the Department of Justice. The main terms of the settlement are that Novozymes has agreed to plead guilty, pay a fine of USD 275,000, and make a payment of USD 250,000 for an environmental service project in the Roanoke area. (Novozymes A/S 2009)
261 Appendix 19 – Investor Interview 3
8.2.3 Mainstream SRI Investors
The Case of a Sell-Side Analyst

As seen in the categorization of the interviewees according to the three decision models above in figure 19, the vast majority of investors and analysts interviewed are situated within this category. One of the interviewed sell-side analysts is using the dual decision model. According to this sell-side analyst, ESG factors are given some kind of value in the form of check mark or yes/no questions, however, these questions are almost entirely governance related or relate to whether the company comply with industry directives and basic regulation. In addition, this sell-side analyst uses negative screening as a compliment to the financial research due to the fact that it is the aspiration of the company to be socially responsible, and it therefore has some SRI experts in-house that are in charge of the company’s ESG procedures and screening standards. This is a clear example of a sell-side analyst that has recently gone from solely using financial criteria to just getting acquainted with ESG factors, although only taking them into consideration in the research to a very limited extend. Thus, this analyst is at an infant stage of shifting the investment perspective towards acknowledging that ESG factors conceivably give a more accurate fundament for the financial analysis. This is expressed by the sell-side analyst as follows: “[…] we have simply begun the process of integrating what you call ESG factors into our research, but overall I still think we have quite a long way to go before these issues are fully integrated. Even though we started the process and we have a dedicated team, it’s not fully integrated into the actual research.” This statement shows that in practice it is up to the specific analyst whether or not to use the ESG information provided by the company’s ‘SRI specialist’: “[…] even if the screening shows that there are a lot of unsatisfactory issues, I could still end up with a positive conclusion on the outlook for the stock.”

Mainstream Investors are at an Infant Stage of Including ESG Factors

Mainstream investors and buy-side analysts employed in institutional investment houses have another attitude towards ESG factors, however, this attitude is very much dependent on the specific time horizon, as well as on the objectives of the client. This means that buy-side analysts and mainstream investors are an extremely diversified group, and the applied investment criteria diverge significantly from that of sell-side analysts. Operating with a medium to long time-horizon allows some of the buy-side analysts, and most of the interviewed mainstream investors, to take long-term drivers into consideration. However, the use of ESG methods varies significantly. Based on the overview in figure 18 above, no screening tool is applied on stocks of national companies, except from one single investor, as the institutional investors feel that they have good relations with

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262 Appendix 19 – Investor Interview 3
263 Appendix 19 – Investor Interview 3
264 Appendix 19 – Investor Interview 3
national companies.\textsuperscript{265} Thus most investors use negative screening on its foreign stocks and have an agreement with a screening agency\textsuperscript{266} to make use of shareholder activism if needed. However, shareholder activism has only been chosen in very few cases.\textsuperscript{267} An investor describes its ESG methodology as systematic. However, you can question the systematic element as ESG factors are regarded on an individual basis, thus the weighted impact of a specific ESG factor becomes subjective: “Our guidelines are systematic. Our working methods consist of screening made by EIRIS. Our two SRI specialists evaluate the cases that occur. Our company has signed UNPRI and is involved in different networks, for instance Dansif. Herein lies the systematic methodology.”\textsuperscript{268}

When it comes to how the systematic approach is handled in practice the same investor expresses that: “On a daily basis we work with gut feelings.”\textsuperscript{269}

Even though 7 out of 9 interviewees include some kind of ESG method in their valuation practice, most of them have only recently started working with ESG factors, which reflect their very subjective and unsystematic approaches: “We read it [ESG information], but it is harder to calculate than the financial key figures, but of course we have it in the back of our minds that they are doing a good job. It is not used as systematic as financial key figures.”\textsuperscript{270} Even though mainstream investors are at an early stage of including ESG data in their investment analysis, they are slowly starting to communicate on their websites that they have a socially responsible profile. In practice, the ESG method used is often basic negative screening: “We have a negative list of companies we cannot invest in, but we do not have a positive list. Basically we do not put figures on the ESG – hence no value is on them. We usually just exclude the companies.”\textsuperscript{271} This means that very simplified methods are used, which only consider the result of one or two ESG parameters in a separate analysis, hence, it can be discussed to what extent the investors in question are investing socially responsible. Moreover, most of the interviewed investors see a purpose of including ESG factors in their analysis but the inclusion of these is currently based on 'gut feeling' and a 'back of my mind' attitude: “It lies in the back of my mind that the company is doing a good job and is behaving well.”\textsuperscript{272} This statement serves as a good description of the underlying problem, that is, when it comes to consider other ESG aspects than concrete laws of compliance/non-compliance, it becomes very complicated to handle a new risk element or business opportunity. The explanation is that an issue of one company rarely corresponds exactly to an issue of another company, even though they are within the same industry. Thus, the impact

\textsuperscript{265} Appendix 20 – 23: Investor Interview 4, 5, 6, 7
\textsuperscript{266} Appendix 20 – 23: Investor Interview 4, 5, 6, 7
\textsuperscript{267} Appendix 22 and 23 – Investor Interview 6, 7
\textsuperscript{268} Appendix 23 – Investor Interview 7
\textsuperscript{269} Appendix 23 – Investor Interview 7
\textsuperscript{270} Appendix 20 – Investor Interview 4
\textsuperscript{271} Appendix 22 – Investor Interview 6
\textsuperscript{272} Appendix 21 – Investor Interview 5
assessments of a risk parameter or an opportunity are therefore case-based, and according to the judgement of the individual asset-manager: “[...] they [Novozymes] make very detailed information on their environmental input and output. That gives us a good feeling about the risk [...] We read it [ESG information], but it is harder to calculate than the financial key figures, but of course we have it in the back of our minds that they are doing a good job. It is not used as systematic as financial key figures. It might point to some deeper analysis if these [environmental] figures were deteriorating.”

However it might be valuable to consider ESG factors as one investor outlines: “You can put a higher [price] premium on companies that do really good in terms of the more soft elements, however, that would be based on gut feelings.”

How ESG Parameters could be Factored into Existing Financial Models

Most mainstream investors have many ideas and suggestions on how ESG factors can be included in the existing valuation models. One example is that ESG drivers could influence the Weighted Average Cost of Capital (WACC) of a company. The beta, that is a measure of the volatility, or systematic risk, of a portfolio in comparison to the market as a whole, might also be lower:

“The obvious thing to do is to influence the WACC. The beta might be lower. A company like Novozymes that include a lot of attention to ESG factors ought to have a lower WACC.”

An investor puts forward the idea of giving a lower risk premium to companies that have a good ESG performance: “The argument for excluding companies is when the risk becomes too high. A high risk premium is ascribed to companies that have issues with its ESG factors [...] we do not ascribe a similar lower risk premium to companies that are doing a good job at addressing ESG factors.”

Thus, companies that are leaders in reducing risk and proactively seeking opportunities is currently not rewarded in existing valuation methods. This leads us once again to take on the argument that no conclusive method of taking ESG factors into account in an existing valuation model in a transparent and systematic way exists. In analysis two it was demonstrated that attempts have been made by Schaltegger & Figge (1997) and Chousa & Castro (2006) to develop methods of factoring in ESG factors, however, no systematic approach could be given to how the models should be approached in practice. This makes them unmanageable and unattractive for the mainstream investor community, which is also shown here, as none of interviewees use the given models. Of course, we are not aware of how ESG issues are weighed according to the WACC by screening agencies. How this is done in practice is the main business idea of service providers such as GES and EIRIS, and it is the reason why they exist and benefit from the increasing attention towards CSR in an investor context.

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273 Appendix 20 – Investor Interview 4
274 Appendix 21 – Investor Interview 5
275 (Moffett, Stonehill & Eiteman 2006)
276 Appendix 20 – Investor Interview 4
277 Appendix 23 – Investor Interview 7
Some investors point to the possibility of giving certain pressing ESG issues, which currently have the clients’ attention, a value that is typically included in the forecasting. Thus still in the form of an indirect value. An example of a contemporary issue that everybody is talking about is the negative consequences on the earth caused by climate changes. One investor sees the purpose of linking ESG with business value in this context: “One of the areas where we see a direct link between ESG and business risk is in terms of the climate debate. In this case you can take a valuation model and put a price on an ESG input. There will always be things that cannot be factored in directly. The indirect manner whereupon ESG factors are included will never be in terms of a direct value.”

When asking about Novozymes’ ability to sell their ‘investment case’ an investor points to the fact that “Novozymes increasingly is findings ways of incorporating achieved goals into its selling propositions.” This ability is, by the investor in question, included in the review of the management of the company, thus it is solely governance related. This investor was aware of the way Novozymes had avoided negative press coverage of using GMO techniques by engaging with NGOs and having transparent communication on the topic. This example was for the investor a case of good management practice that was not rewarded with a value but “it’s a factor that I think about.”

When the interviewers turned to question why the suggested ESG methods not are implemented in everyday valuation practice, investors keep stressing their primary objective: "Our primary goal as investors is to maximize the ROI. It is not about making moral decisions." This clearly demonstrates that even though the analysts and mainstream investors found in this category have good intentions and reflections on the topic, the mainstream investor community is at a very early stage of working with ESG factors. Thus addressing the question of how ESG factors can be included in a valuation model when talking to investors and analysts the following conclusion is reached; it becomes too complex to incorporate ESG factors into existing valuation models, which means that the investor community currently does not reward companies that perform strongly on ESG parameters. This was also seen in analysis two, as the theoretical attempts to integrate ESG factors into existing valuation models were inadequate.

8.2.4 Integrative Investors

Even though the mainstream investor community is at a very early stage of working with ESG factors, there are examples of investors that succeed in working systematically with ESG factors in

278 Appendix 23 – Investor Interview 7
279 Appendix 24 – Investor Interview 8
280 Appendix 24 – Investor Interview 8
281 Appendix 24 – Investor Interview 8
their valuation practices. In the interview sample of this thesis, two investors have very sophisticated approaches to systematically include ESG factors. One investor applies a model similar to the DCF model with three time stages; short-term, long-term, and very long-term, focused on return on capital employed (ROCE)\textsuperscript{282}. As this method is the most sophisticated ESG method seen while writing this thesis, the approach is characterized as a best example on taking an integrated approach to including ESG factors in investment decision-making and it will therefore be elaborated on in depth.

In this method, addressing ESG factors is seen as a necessary mean for the company to exist in the long-run: "It is the first and the second periods the ESG factors have the most influence, as in the third period everything goes to its cost of capital. You could say that the company would not exist in the third period if it does not consider ESG factors. The sum of those three parts, the value of the returns from year 1-5 and year 6-15 and 16-40, the sum of those is what we think the fair value is today."\textsuperscript{283} This means that the ESG factors are given more value in the short-term, as the forecasting for this period can be made more accurate than in the very long-term. Opposite, in the very long-term the number of ESG parameters can augment significantly, as new opportunities emerge and as the society will continue to demand the business community to address new issues. Because the forecast is farsighted and based on highly uncertain assumptions, the ESG factors are given a much lower value. Thus, the main thought in this approach is that the investor does not believe that the company will exist in the third period if it does not consider ESG factors as important value drivers in its business practices and behaviour towards society in the first and second period.

As ESG value is integrated into each time period in the form of forecasting, it is not possible to identify the specific ESG factors as individual components in the method: "It is very hard to value sustainability factors. ESG factors are necessarily integrated into each of these modelling periods, but to say that you can split them out is not possible. They are really integrated in."

ESG factors are integrated implicit in the forecasting via an estimate made according to what is considered material in the sector of the company: "How do we integrate it into our model? That is the hard part. The honest answer is, it is implicit in all of our forecasts. And we cannot make it explicit; we do not have a feature to make it explicit. When we think about a company and sustainability, we think about what is material in that sector."\textsuperscript{285} The investor puts forward the same argument as was argued by several mainstream investors, who use the dual decision model: "Some things are just not material [...] E.g. how do you factor in Novozymes’ lower turnover because they treat their

\textsuperscript{282} A ratio that indicates the efficiency and profitability of a company's capital investments, and should always be higher than the rate at which the company borrows. Investopedia: http://www.investopedia.com/terms/r/roce.asp (25.07.09)
\textsuperscript{283} Appendix 25 – Investor Interview 9
\textsuperscript{284} Appendix 25 – Investor Interview 9
\textsuperscript{285} Appendix 25 – Investor Interview 9
people better? It is really hard. They are happier and it may be related to productivity." It is simply not possible to operate with ESG factors as explicit elements in an integrative approach, which means that the impact of one specific ESG factor cannot be calculated individually: “The ESG factors are not explicit in our valuation, but it is integrated systematically. But I cannot tell you how much of a growth margin comes from ESG factors. But it is in there.” The investment philosophy of the investor in question is, without a doubt, that by integrating ESG research into a long-term investment strategy the investor will strengthen the fundamental investment analysis, which is the basis for selecting stocks for investment: “[…] what you quickly learn is that for most companies, most of the value comes from the long-term. So it does not matter what happens this quarter or this year or even really the next couple of years, it matters whether this is going to be a going concern in the future.”

8.3 Other ESG Elements
Having analyzed the ESG evaluation methods used by the different groups of investors, other elements in relation to ESG factors addressed in the interviews will be examined in order to give a more fulfilling answer to the third sub-question. First, it will be investigated on a more general level, which is not company specific, how the analysts and investors consider ESG factors. Secondly, and more specifically, it will be examined how Novozymes can obtain superior value by improving the communication of their CSR strategy and ESG data.

8.3.1 The Use of Sustainability Indices
None of the analysts or investors actively use sustainability indices such as the DJSI or FTSE4Good. The majority answer that they just do not use them but one investor expresses that it gives him “a good feeling because I know that the index [DJSI] is based on a very thorough analysis”. The reason for not using the indices, which consist of best in class companies, may be due to the fact that most investors only use negative screening. However, as one investor remarks, “Maybe it would be possible to utilize rankings and indices in the future but it will require a huge shift in attitude.”

8.3.2 Internal Set-Up
When speaking to the investors and analysts about how they consider CSR in their investment decision it becomes clear that the amount of consideration given to these issues is related to the
internal set-up. One analyst does not consider ESG factors, as “it is not a rule of the house”. Another investor stresses the fact that the company has a team of SRI analysts, however, the screens they make are not decisive for the result of the analysts research, which surely indicates that the two functions are separated. Several other investors buy screening services from outside providers, and hence the asset or portfolio manager is not always aware of the reasoning behind the decisions taken, but solely follows orders. Evaluating ESG data requires a whole set of different competencies than what is traditionally required to be a financial analyst or investor, and it may therefore make sense to split up the tasks. For this reason, one investor has created a committee for social responsibility that removes the duty of evaluating ESG data from the finance professionals to the few members of the committee and recently, a SRI secretary has been established to monitor the stocks in the domestic portfolio. These initiatives were undertaken to improve and make the ESG evaluation more systematic. However, we argue in analysis one that a new integrated decision model is required, which would entail that the people making the investment decisions are skilled in both financial as well as in ESG analysis. This naturally requires further education or competence development. A split between tasks may then only be a transition phase, although it may be long. Moreover, it is characteristic to see that the more comprehensively the ESG data are considered by the investors; the more integrated the investment decision becomes.

8.3.3 Sustainable Products vs. Sustainable Behavior

When analyzing the analysts’ and investors’ considerations when making investment decisions, a distinction has been made in this thesis between the company producing sustainable products and the business being run in a sustainable way. As shown in chapter five when introducing the case company, Novozymes is both producing sustainable products, as well as working strategically with CSR, which relates to the company behaving in a sustainable way. When asked how the distinction is made and which is more important, one answers: “[…] focusing on the products the company is producing. Not the way the company behaves. But that [good behaviour] is nice – that lowers the risk.” And another investor adds: “The potential of their products is more far reaching that the benefit of their own optimization of how the company is run.” More attention is thus given to the products.

292 Appendix 17 – Investor Interview 1
293 Appendix 19 – Investor Interview 3
294 Appendices 20 to 23 – Investor Interview 4, 5, 6, 7
295 Appendix 21 – Investor Interview 5
296 Appendix 23 – Investor Interview 7
297 Appendix 24 and 25 – Investor Interview 8, 9
298 See definitions on pp. 6-7 for further explanation
299 Appendix 20 – Investor Interview 4
300 Appendix 19 – Investor Interview 3
However, more investors argue that the two cannot be separated, which is also the philosophy of Novozymes. “It is the totality you valuate […] It is linked to many things; both that they have good products in their pipeline, as well as a completed focus on the more soft aspects.” Another investor agrees, but argues that sustainability has three dimensions: “Both sustainability related to the products and sustainability related to the behaviour is important. There is a third element of sustainability: sustainability of business for the business sake. Quite apart from the ESG factors per se. […] Pursuing the positive, avoiding the negative and being a strong business.” From the interviews it can be seen that as the level of ESG considerations increase and the more important the behavioural part of sustainability becomes, the two parts become increasingly essential to one another. One investor nonetheless emphasizes that sustainable behaviour cannot stand-alone – there has to be a business case because “if the company goes bankrupt with the world’s best CSR strategy, it still goes bankrupt.”

8.3.3 Barriers and Drivers of ESG Integration

The question then turns to how these ESG factors can become integrated into the investment decision. Even though the analysts and investors were not asked what hinders them in further integrating ESG factors, some still express that there are barriers: “For me to use it [ESG data] there has to be a defined set of parameters that are transparent and comparable.” And another investor adds: “If everybody did it in the same way it would be easier for us to compare and integrate into our analysis.” Both statements express one of the barriers that was outspoken by investors in general in analysis one, namely the lack of comparability. This may be related to the analyst and investor having no or a relatively low level of ESG data considerations, as illustrated in figure 10. Hence for them it may be that ‘integrate into our analysis’ means that it would be easier for them to integrate ESG factors if these would fit into a traditional financial analysis, which they are already familiar with. Another investor points out that “historically, sustainability focused companies have not outperformed the overall market”, which underlines another barrier in analysis one, namely that a proof, of these companies to perform at least as good as the market, is needed before these investors would consider investing. There are different perceptions among the analysts and investors about what drives the development. One investor emphasizes legislation as an important driver. An analyst argues that it is solely up to the companies to push the development: “Companies should drive the development
and set the standard. It has to be a business case for it. Talking to the companies I cover I hear nothing about environmental issues or CSR performance.\textsuperscript{307}

On the contrary, the sell-side analysts argue that it is the clients who are the key drivers. As one state: “if our clients asked us to take ESG or CSR into consideration this is something we would consider.”\textsuperscript{308} And when asking the same sell-side analyst what it requires to start taking ESG factors more into consideration, the answer is: “A kick in the butt from the client side. If the demand is there from the client I would certainly do it. It is simply still on an early stage.”\textsuperscript{309} The sell-side analyst thinks some companies are already doing a lot and says: “I think it’s up to us, it’s the analysts and the investors that need to change. I’m not going to do anything that my clients are not asking me to do. The service is not in demand.”\textsuperscript{310} The sell-side analyst elaborates: “When those people [investors] start to focus and demand on these issues, you can be sure that the rest of the sell-side analysts will start focusing on that side as well. It is very much dependent on time horizons.”\textsuperscript{311} The investors are more positive towards the change albeit: “To get more focus on integration on the investors’ side will be a gradual development”\textsuperscript{312} Demand, also from further down the chain is the key, as an investor in a pension fund emphasizes: “Demand from our customers right now after these new elements is not that strong, but I think it is going to change in the future.”\textsuperscript{313}

What can be concluded is that there must be a demand, or at least an expected future demand for the investors and analysts to be socially responsible, in order for them to start consider integrating ESG factors further into their investment decision. This demand goes all the way down to the individual person, as some investors are employed in pension funds and hence administer ordinary people’s money. If these people, or alternatively their employers, are indifferent about how the pension savings are invested, there will be no outside pressure on the pension funds, or on the analysts, to consider ESG factors any further. There may nonetheless be a business opportunity, as one investor states it “is communicating the social profile we have to our customers […] it is also a branding tool for us and hopefully it will evolve into a competitive resource.”\textsuperscript{314}

\subsection*{8.3.5 Future Development and Outlook}

Continuing the discussion, it is relevant to look at analysts’ and investors’ future outlook for considering ESG factors in order to be able to make recommendations to Novozymes on how to anticipate the development.
Several investors articulate that it is only a question of time before the development really takes off. One investor speaks from experience: “We started a fund five years ago, were we selected the best in class companies. But it was never a success, but that was also five years ago. With all the debate, I think in three to five years it will get more and more important to make sure the companies you invest in have a dedicated attitude towards these [ESG] factors.”

Another investor sees a similar development: “I think there is a long-term global movement towards sustainability and you position yourself already today. And you can see there is a change of attitude both among investors but also among customers and clients.” However, the investor has some doubts about when the development will speed up due to the current financial crisis: “We think it is not so far out in the future but given the situation we are in just now with a financial crisis, it [ESG factors] is not what is driving share prices. But in the long run you can imagine that the underlining trend or movement towards sustainable companies will help them perform, thus we should consider taking this into our formulas.”

Others share this concern as the experience is “[…]nobody has asked for these services due to the recession, it is just not on the agenda.”

And another statement follows: “I think that in recession times, unfortunately, ESG issues are not top priorities. It requires dedication of staff and resources. Things will start moving again after the recession.”

Thus most investors and analysts acknowledge the development and growing importance of considering ESG data albeit the development may take some time and may be slow, currently due to the financial crisis.

One investor has some interesting insights regarding the development of methods: “In five or ten years there will be more sophisticated ways of looking into this [ESG factors]. Right now it is hard to make it an isolated part of the valuation. We are not saying ‘this is the market value and then you add on the ESG value’. I do not see how we can do it [integrate ESG factors] in the short term but that does not mean it does not have a value. I think it has a value. It is so much in focus, I am sure there will be developed some models and we will look at those models and see if they make sense and add more to the valuation than we have today.”

The investor thus recognizes that the currently used methods are often simple and indicates that there may be more value in ESG data than what the current models are able to capture. This is the very core of the problem but has hitherto only been expressed by companies, including the case company Novozymes.

This leads us to further investigate what the analysts and investors believe can give Novozymes superior value and how Novozymes can possibly improve their communication strategy on CSR in

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315 Appendix 20 – Investor Interview 4
316 Appendix 18 – Investor Interview 2
317 Appendix 18 – Investor Interview 2
318 Appendix 17 – Investor Interview 1
319 Appendix 19 – Investor Interview 3
320 Appendix 22 – Investor Interview 6
order to stay ahead of competitors, and thus maintain their best-in-class position and as a result of that their competitive advantage.

8.3.6 Areas for Improvement of Communication on ESG Data

When asking the sell-side analysts about how Novozymes can improve their communication of the CSR strategy and the attention to ESG factors, they are uncertain of what to do with this additional information, as they are not even sure what to do with the current ESG information. One analyst states: "The quarterly reported qualitative data from NZ are not used. The data is right there; it’s not even abstract information. I have not really figured out what to do with the information, even though the information is right there."³²¹ The other analyst, who does not consider ESG data claims that "Novozymes is pretty much doing a standard thing on CSR"³²² and point to the problem of intangibleness: "I’m aware of the Novozymes case in the US, they very elegantly avoided mentioning it. How would you measure the impact of such an accident, to objectively define the impact?"³²³

It obviously relates to the objectives of the investment strategy, and herein especially the time horizon of the investors, whether ESG factors are relevant in the first place, hence "It is important to determine when you want the stock to perform and the factors you look at."³²⁴ An analyst points out that "There is a discrepancy there, Novozymes is building for the future and investing long-term, but the investors want value here and now, within a 12-18 months horizon. It depends on the profile of the investor."³²⁵

Accordingly, mainly investors with a longer time horizon are asked similar questions to find points of improvements. One thing outlined by an investor is that an integrated report is preferred so that the annual report contains both financial and ESG data.³²⁶ This is already done by Novozymes. Two other investors express the need for visibility and raw data: "They must give us as much visibility into all these things as possible. Maybe they can give us more than we already have. To make us understand the company."³²⁷ And another investor argues: "The more figures you get, the better - we do not need ten pages where they speak about details about what they do. It is better for us to have figures because we are used to looking at figures."³²⁸ This will help to better understand at least some of the improvements CSR contributes to, such as efficiency: "We can count efficiency and the products they deliver - that we can put a value on. We can convert good

³²¹ Appendix 19 – Investor Interview 3
³²² Appendix 17 – Investor Interview 1
³²³ Appendix 17 – Investor Interview 1
³²⁴ Appendix 23 – Investor Interview 7
³²⁵ Appendix 17 – Investor Interview 1
³²⁶ Appendix 23 – Investor Interview 7
³²⁷ Appendix 22 – Investor Interview 6
³²⁸ Appendix 20 – Investor Interview 4
sustainability behaviour into efficiency, and we can convert efficiency into margins and we can convert margins into earnings and we can convert earnings into better performance.\textsuperscript{329}

8.3.7 How to Obtain Superior Value?

When asking analysts and investors what can give Novozymes superior value, most emphasize that the company is already doing a lot and that they cannot think of much to improve: “I do not have any ideas on what they can do differently. They know that better than I do. I think they are doing a pretty good job.”\textsuperscript{330} Another investor elaborates: “In the case of Novozymes, they are clearly one of the best companies in the world in terms of integrating sustainability into how it runs its business. And it does that in two ways: 1) of identifying positive sustainability drivers of its revenues and earnings, hence actively seeking opportunities for their enzymes to address climate change to make a whole bunch of processes more energy efficient, less water consuming etc. Their enzymes help the world in many, many different ways. That is all the positive stuff. And 2) how to avoid negative sustainability drivers that would affects it revenue and earnings. Hence on the down side, the negative side, they are equally vigilant about ensuring that when they make their enzymes, they do it in a way that is not as energy intensive – they are conscious about their environmental impact. And similarly they think about if their customers are sustainable. They think about it long and hard.”\textsuperscript{331} This statement clearly shows that both aspects of sustainability, both the product, as well as the behaviour related aspect, are of great importance. This is further emphasized by another investor: “On the product side, addressing the environmental issues, bioethanol is one of the key arguments for pricing the company. That story they cannot tell any better than they do now, which is also reflected in their current stock price. The other side [operations side] […] Novozymes has a high degree of credibility in creating results, they deliver results.”\textsuperscript{332} This shows that both the products and the behaviour of the company is a source of value creation to the company. Another investor agrees: "NZ has an ability to be an early thinker, using opportunities as a selling point, thereby creating competitiveness.”\textsuperscript{333} Much attention is given to make sure Novozymes’ price remain high: “Basically Novozymes has a price that for many is incomprehensible. The price reflects top management’s ability to tell the story. What we are looking for at Novozymes are risk factors that indicate that they cannot maintain the current price.”\textsuperscript{334} Basically, according to the investors, Novozymes should keep on doing what they are already doing on the sustainability area, both in relation to products and the way the business is run. According to one investor: “Novozymes will not get more additional value from doing more in this
area, because they are already high on the curve. But many companies could learn a lot from Novozymes. CSR is deeply integrated into the company; Novozymes has succeeded in this area.  

8.4 Conclusion Analysis 3

When analyzing the findings from the interviews with analysts and investors of Novozymes, it was evident that the interviewees could be categorized according to the three decision models identified in analysis two. Each group of investors value ESG data differently. ‘Mainstream financial investors’, who use the single decision model do not value ESG data at all. A reason for not using ESG data is, according to the analysts and investors, a lack of comparability of data as well as a lack of proof that socially responsible companies perform better than other companies. This finding is equivalent to the integration barriers found in analysis one.

Most interviewees were categorized as ‘Mainstream SRI investors’. The methods used by these investors varied from simple yes/no questionnaires to company analyses resulting in negative screening, which indicates that most of the interviewees are still in an infant stage of considering ESG data. The general opinion is that it is important that companies focus on ESG factors, however, ESG data are often only factored into an investment decision based on ‘gut feelings’. Especially the most intangible social factors pose problems. Many interviewees use simple negative screening, and thus aspire to be socially responsible. Best-in-class indices are not used by any of the interviewees. Most use external service providers to make screenings, however some interviewees have internal SRI specialists. Either way there is a split among the tasks of evaluating financial and ESG data. Thus they consider ESG data to a very limited extent and the value gained from these simple methods can be questioned. Some mainstream SRI investors suggest incorporating ESG factor into traditional financial analysis by lowering the WACC or beta. However, there have been no signs of a concrete method to do this, which is in accordance with the findings from analysis two.

The category ‘integrative investors’ includes two investors and they outline very sophisticated methods to factor ESG data into an investment analysis. One investor implicitly integrates ESG data into a valuation that stretches over 40 years, where significant value is contributed from ESG factors. The internal set-up of these investors is integrated so that the same investor evaluates both financial and ESG data. This is found to be a best example of including ESG data into an investment decision, as ESG factors are highly valued in terms of being fundamental in the valuation.

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335 Appendix 23 – Investor Interview 7
336 Appendix 23 – Investor Interview 7
Providing an outlook from the investor perspective, there is wide consensus that sustainability is important today and will become even more important in the future. To produce sustainable products remains especially central to investors, but the behavioural part of sustainability is increasingly seen as vital for the long-term performance of the company. As the majority of analysts and investors perceive Novozymes to excel at both, they have more complimentary words than points of improvement on the communication of Novozymes’ CSR strategy.

In sum, the mainstream financial investors do not value ESG factors. Mainstream SRI investors seem willing to use more sophisticated methods that include more ESG data, however, such a method is not known. Therefore they cannot ascribe more value to ESG factors, leaving room for development. The integrative investors are not capable of ascribing an explicit value to ESG factors either, however, their integrative methods leave them convinced that a significant value from ESG data is captured.

9.0 Recommendations for Novozymes A/S

This section, based on the above analysis, will provide Novozymes with eight recommendations on future areas of actions with regards to addressing Novozymes’ CSR communication towards investors with the aim of improving the company’s overall business performance. Thus, the recommendations will provide an answer to the fourth and hence last sub-question: “How can Novozymes’ current communication of ESG data to investors possibly be improved to the benefit of both parties?” The recommendations will be presented one by one followed by a short elaborating paragraph.

As Novozymes is characterized as being a frontrunner in integrating sustainability into its core business, a relevant question would be to ask if Novozymes has reached the point at the curve of economic benefits versus CSR input where it cannot benefit any further from its sustainability work? In the previous analysis the majority of investors argued that there are sufficient ESG data available. However, we believe that providing investors with additional and elaborated ESG information will give a comprehensive and holistic picture of the company, which presumably will be desirable for both the company and its investors. Moreover, as the number of SRI investors is increasing, the demand for ESG factors will rise accordingly. Additionally, companies are increasingly becoming aware of the importance of making strategic CSR, making it vital to stay ahead of competition. Therefore, we argue that Novozymes should continue to take a proactive approach to CSR and continuously question the barriers towards including CSR factors in the investment universe. By being proactive Novozymes will keep extending the economic benefit of investing in CSR. This will be possible, as society will continue to increase its demand to the business community to address arising issues thus benefiting society while being profitable.
This leads us to recommend the following actions:

1. **Group your Investors According to the Three Investment Decision Models**

   It is recommended Novozymes to apply the continuum from analysis three to group their investors’ approach to CSR information. Knowing the investment philosophy of the investors in brief and subsequently placing the investor in one of the four groups in the continuum, the IR department will be in a better position to target the ESG communication towards the specific groups, and thereby the individual investor. The level of understanding will be balanced right away and more specific and in-depth questions can be addressed. This will ensure that Novozymes and their investors obtain a mutual understanding of which ESG issues that are relevant to address, saving both parties time and resources.

2. **Develop a Sustainability Fact Sheet or Presentation Specifically for Investors**

   When an investor contacts the IR department with the aim to get an insight of Novozymes’ sustainability profile, it is suggested that a fact sheet or a standard ‘to the point’ presentation, targeted to the specific group of investors, is sent to the investor prior to the meeting. This brief information material should contain the investment case and the sustainability case, as well as the newest ESG parameters from the ‘Financial and Sustainability Discussion’ in the company’s annual report. This will help Novozymes raise the level of knowledge of the investor regarding CSR performance prior to the meeting, and thereby higher the sustainability discussion itself at the meeting, which will benefit both parties. As found in the interview sample, sell-side analysts are not always using the single decision model. The reason is that there is a starting tendency of sell-side analysts who begin to look for simple sustainability related indicators, which opens a window for getting very simplified sustainability messages across to this group of financial professionals. It is

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(Schaltegger, Wagner 2006)
believed that Novozymes will start to receive sustainability questions from sell-side analyst in the near future, thus a communication approach could be developed to meet these new forms of requests.

3. **Measure the Impact of Your ESG Information Through Perception Studies**

In order to obtain more knowledge about if and how investors of Novozymes use the ESG data, perception studies can be conducted by a third party. These studies should contain numerous in-depth questions about how concrete CSR information is used by the investors, thereby creating concrete impact assessments of the specific CSR related initiative. One approach could be to send out questionnaires to analysts and investors annually, which will give an insight to what CSR information is used by the investor community. This method of engaging with investors is inexpensive and may tickle the investors and analysts to think about ESG factors. As Novozymes is a frontrunner within working proactively with CSR, some ESG data are rather innovative to the investor community, which means that the impact scores of these will most likely be very low. Therefore the perception studies should initially be addressing CSR initiatives that have existed for the last 3-5 years and are recognizable to some investors. This initiative will enable Novozymes to focus on the CSR initiatives with the highest impact score among investors.

4. **Flash Historic Quantifiable Indicators as Often as Possible**

‘Raw data’ on the company’s CSR performance should continue to be provided through the current communication channels that are the annual report, quarterly reports, road shows, and investor requests. An increasing amount of ‘raw data’ was also a request by the investors interviewed, as investors can analyze the ‘raw data’ according the individual preferences. The quantifiable CSR data on e.g. water consumption, CO2 emission, employee turnover etc. from earlier years should be used every time new ones are reported338, this provides the investors and analysts with comparable numbers year on year, demonstrating changes and improvements. Being consistent with providing investors with quantifiable indicators on CSR initiatives is especially of great importance.

5. **Take the Lead - make the Link Between CSR and Value Creation Explicit**

The number one selling point of Novozymes’ sustainability profile is the environmental dimension mainly due to the superior competencies of the products produced. The social dimension of sustainability is reported to a much lower degree, currently in the form of traditional social parameters such as number of fatalities and working accidents, employee turnover, rate of absence, level of employee satisfaction and the like. Where the link between ESG data and

338 Appendix 12 – Novozymes’ Sustainability Indicators
financial materiality is difficult to make explicit, it is recommended that the company explains why the specific ESG data is indirectly value-creating effecting the company’s license to operate. Novozymes could take the lead role as first mover and verbally create an explicit link between socially related initiatives and the impact on the company’s shareholder value. Here the word explicit is stressed, as it is vital to communicate explicit ESG linkages in order to make investors start using the data implicitly in their research to a much higher degree.

If Novozymes on the one hand provides investors with the ‘raw data’, and on the other hand creates the link to shareholder value on the CSR initiatives that are harder to make material, the company is meeting the demands of all kinds of investors. This includes investors and analysts just starting to address sustainability issues in their research, as well as the investors using much more sophisticated ESG methods in their valuation.

6. **Continue to Engage with Agenda-Setting Organizations**

It is recommended that Novozymes continues to engage in networks and working groups of agenda setting organizations that promote the need of addressing ESG factors in the investor community. Novozymes already addresses this exact point in the company’s intention to ‘become a voice on the world stage’. This intention is a part of the strategy towards realizing its vision; to help change the world: “To help change the world we need to become a voice on the world stage. Through insight, relations, and alliances we influence and learn from the political and public agenda, creating new market opportunities and optimizing the regulatory framework for our business.”

The company should keep investing time in engaging with key stakeholders and decision-makers such as WBCSD, GRI, and the UN, as well as take on a proactive role and seek to influence the progress. By being present in international forums that address the issues of incorporating ESG factors into company valuation, Novozymes impact the future development of sustainability KPIs within the Biotech sector.

7. **Integrate the View on Sustainability and Financials Internally**

A close co-operation is recommended between the SD center and IR department. In practice, one person from the SD center could be attached to the IR department on a permanent basis, meeting regularly for instance once every month discussing the development of the company’s sustainability targets, new requests from investors etc.

As shown in the analysis the most comprehensive decision model was an integrated model, which require the investor to understand both the CSR initiatives Novozymes undertakes as well as the business financials. Accordingly, Novozymes may benefit from having internal resources with the

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339 Corporate positioning Spokesperson brief, Novozymes internal documents (confidential)
340 Corporate positioning Spokesperson brief, Novozymes’ internal documents (confidential)
capabilities to navigate unhindered in both areas to match the investors, as we believe there will be more integrative investors in the future. The internal set-up will help attract integrative investors.

8. A Quick Win…

It is suggested to reassess the pension planner that manages Novozymes employees’ pension savings. The current pension fund does not have an explicit long-term sustainability focus and does not offer its customers any options to invest according to socially responsible parameters. By choosing a pension fund with a long-term sustainable vision like Novozymes the employees have increased opportunities to act socially responsible. This may increase moral among employees and make them actively think about sustainability. The alternative investment opportunity will not only benefit society but also companies with a high CSR performance. Hence, this will make up a large pool of money to be invested in companies such as Novozymes.

10.0 Conclusion

The following concluding section will provide an answer to the research question:

“Why is corporate social responsibility (CSR) currently valued differently by companies and investors, and is this reflected in the case of Novozymes?”

It was quickly discovered that if the field of CSR and SRI seemed broad and complex when taking a first glimpse, the complexity exceeded all expectations when investigated further. Simply said, the concepts of CSR and SRI are complex and contain numerous sub-categories, which can be interpreted in various ways. The result is that a massive amount of academic material exists on the topics, but very little theoretical work has been published. By mapping and describing the different agents driving the development for social responsibility, an overview of the field of study was obtained.

In analysis one it was empirically found that companies to an increasing extent report on their CSR initiatives. Moreover, it was seen that integration of CSR performance into the annual report is becoming a more common practice but only few companies report systematically on their CSR goals and performance year on year. The presented CSR reporting trends indicated a common belief among the companies that CSR commitments are key indicators of a company’s current value and future potential, as it must be assumed that companies would not engage in extensive reporting and target setting unless it would be beneficial to them. Nevertheless, the investor community pays little or no attention to these reports when selecting stocks for investment. Socially responsible investing has won attention in the investor community and the number of SRI funds has increased enormously in recent years. However, SRIs still only constitute a small amount of total asset under management.
In order to validate our initial assumption, which was that companies and investors perceive the value of CSR differently, the business case for CSR from a company and an investor perspective was analyzed. The business case from a company perspective resides in the value that is created from CSR, which can be linked to either financial performance, in terms of higher profitability, or indirectly to shareholder value in terms of higher license to operate. The business case from an investor perspective showed that investors to an increasing extent recognize the importance of CSR. Yet the significant tendency is still that mainstream investors fail to integrate ESG factors into their investment decisions due to the most common barriers identified; lack of material proof that SRI funds outperform conventional funds, time constraints, asset managers’ limited knowledge about ESG factors, and lack of standardized data that is comparable between companies and sectors. In addition, a short-term focus prevails among investors, which is at odds with the long-term nature of ESG factors.

Thus, the initial assumption was validated, as the main problem was identified as being investors and companies perceiving the value of CSR differently. Investors mainly value what is financially material or a proven management practice, whereas companies that work proactively with CSR are aware of the additional value created through their CSR work, but are unsure of how this value should be communicated towards the investor community.

Looking closer at the mismatch of perceptions that exists between the company and the investor community, we argued that there is ‘hidden’ value from valuable CSR work that is currently not captured by investors. Company value is made up of both value related to financial performance and to shareholder value. In the latter, the link between CSR initiatives and company performance is not straightforward, as these factors are often extremely intangible. Contrarily, mainstream investors are caught in the traditional approach to company valuation that characterizes non-financial factors as intangibles, which are hard to enter into a traditional valuation model.

The mismatch in the perception of the value from CSR by investors and companies was investigated at a deeper level by applying contemporary theories. When applying Porter & Kramer on the identified problem, it was demonstrated that responsive CSR is sufficient to mitigate risks, however, to create long-term competitive advantage, a strategic approach to CSR is needed. By addressing key issues facing the industry, engaging key stakeholders, and aligning the CSR activities with core business strategy through defining targets, companies can obtain valuable benefits from their CSR work. However, all CSR initiatives should be situated within a company’s competitive context. Using Porter & Kramer’s framework we argued that companies can be plotted into a curve according to the value from their CSR work undertaken. As the companies working strategically with CSR are situated at the highest point of the curve, we argue that this group of companies is creating the most value stemming from CSR. Consequently, it is believed that these
companies may generate ‘hidden’ value that is currently not realized by investors in a traditional financial valuation. Applying Porter & Kramer’s theory on the case company, it was demonstrated that Novozymes work strategically with CSR and may be place at the top-end of the curve, indicating that Novozymes is in a position where some of the company value from CSR may be ‘hidden’ to investors.

Turning to investigate the link between CSR performance and economic success from an investor perspective, Schaltegger’s theory demonstrated that investors can be grouped according to their view on how they see the relationship between CSR performance and economic success. As ‘mainstream financial investors’ do not consider CSR performance in their investment analysis it does not influence the valuation of the company. On the contrary, ‘core SRI investors’ see a positive link between CSR performance and economic success. The same is the case for ‘mainstream SRI investors’ but only to a very limited extent. The different views on CSR naturally influence the investors’ investment decisions, and two investment decision models were identified: the ‘single decision model’ where only financial data is valued, and the ‘dual decision model’ where both financial data and ESG factors are considered.

However, it appears that some SRIs, presumably ‘core SRIs’, are able to outperform the market in the long-run. If the market is efficient, all investors would be investing similarly and thereby offset the abnormal return. Nonetheless, it is only a small amount of investors who make ‘core SRIs’, even though most investors believe that CSR is important. Thus, we argue that there is a need for a new decision model that to a larger extent includes ESG factors. An integrated decision model was suggested. A theoretical discussion showed that the model should pursue a single objective and integrate financial data and ESG factors. However, the integrated model should not be based on existing valuation models, as none have succeeded in providing a plausible method, which actually works in practice.

Thus, companies and investors perceive the value of CSR differently, as companies working strategically with CSR can obtain a competitive advantage and long-term value, which is currently not realized by investors due to a lack of methods to sufficiently include ESG factors in an evaluation of the company.

The three identified decision models from analysis two were subsequently applied in a case study of Novozymes' investors and analysts. By grouping the interviewed investors and analysts, according to how they viewed ESG factors as sources of value creation, it was demonstrated that in practice each group of investors value ESG data differently. ‘Mainstream financial investors’, who use the single decision model, see many barriers such as lack of comparability of data, as well as a lack of proof that socially responsible companies perform better than other companies. Consequently, this group of investors do not value ESG data in an investment analysis.
Conversely, most of the interviewees were categorized as ‘Mainstream SRI investors’. The methods used by these investors varied from simple questionnaires to negative screening methods, which indicates that most of the interviewees are still in an early stage of considering ESG data. Most of the investors use simple negative screening, either bought from external providers or conducted by internal SRI specialists, and have signed the UNPRI, which in their eyes makes them socially responsible. It was discovered that the arising attention towards ESG factors in the mainstream investor community in practice is mostly based on ‘gut feelings’. This is especially the case for social factors that are hard to relate to financial performance. ‘Mainstream SRI investors’ make suggestions on ways of incorporating ESG factors into financial analysis, however, they have no ideas on concrete methods to do this, which is consistent with the theoretical findings from analysis two, where our conclusion was that a new integrated decision-making model is needed. Interestingly, two examples of investors having an integrated decision approach were found in the case study. These two investors do not fit into the defined investor categories and were therefore named ‘integrative investors’. These investors implicitly integrate ESG factors into a valuation that is very long-term focused, wherein considerable value stems from ESG factors. These investors are not capable of ascribing an explicit value to ESG factors either, but are convinced that a large amount of value from ESG data is captured, making them the best examples of how a new integrated decision model could function. In addition, it is the same person within the investment firm that evaluates both the financial and the ESG data, which means that the internal set-ups of these investment firms are integrated.

Currently, most investors see sustainability as product related, while how the company behaves is gradually viewed as relevant for the long-term performance of the company. As Novozymes possesses both aspects of sustainability, the interviewees put no significant points of improvement forward. However, they all believe that it will gain remarkable importance in the future. Therefore, Novozymes should continue to provide the investor community with CSR information.

Lastly, based on the analytical findings, eight recommendations were made to the case company. As there is a strong tendency in society that sustainability is becoming a vital part of the public agenda, we believe Novozymes will be able to extend the benefits of working with sustainability and at the same time continuously gain economic success. In order to maintain the position as a frontrunner within working strategically with CSR, we recommend Novozymes the following: Their investors should be grouped according to their investment decision models so that targeted CSR information can be provided to each group. This will make Novozymes and their investors gain a mutual understanding regarding CSR performance prior to an eventual meeting, and thereby augment the sustainability discussion at the meeting itself. Regarding the kind of information, as much quantitative data should be provided as often as possible. This will meet some investors’
demands to receive ‘raw data’ that they themselves can analyze. Other investors need more clear linkages of how CSR is related to Novozymes’ performance and we therefore recommend Novozymes to verbally make the link between CSR and value creation explicit, especially on the social dimension, which is hard to materialize. In order to further specify and focus the attention towards the investors, it is recommended to make an in-depth perception study of which specific CSR information is used, and how it is used. Moreover to keep up with the trend of having more integrative investors, it is important that Novozymes has an optimally integrated SD and IR department including a person that can navigate unhindered within both finance and CSR, and hence match the demands from the integrative investors.

Lastly, Novozymes is recommended to continue to engage with agenda setting organizations in order to be able to influence the development of sustainability KPIs in the Biotech industry. In this way, Novozymes and their investors will be readily suited for the future and will be able to gain from Novozymes’ sustainability work.

11.0 Putting the Paper into Perspective

Working with this thesis has spurred many reflections. As the literature on both CSR and SRI is relatively new, alternative sources of inspiration has been intriguing to investigate, especially the broader management literature, as many arising thoughts stem from the field of CSR. One thought has in particularly caught our attention. This thought claims that the company should be seen in a completely new light, namely as a part of the surrounding environment with which it has to be in harmony. Arie de Geus apply the terminology that the company should not be seen as a machine that is created and is owned by someone and thus can be fixed. These are terms that are often used about a company. Instead, the company should be perceived as a living organism that exists for the survival and improvements of the self to become as great as possible, and not only to provide goods and financial return. Just like humans do not only live to work. In this context, profitability should be seen as a symptom of corporate health rather than a predictor of health.341 A similar idea is put forward by Jospeh Bragdon. He argues that some of the worlds oldest companies have survived in the long-run because they think and act like living communities that are integrated into the larger living system of which they are a part of, namely society, markets and the biosphere.342 Companies that understand how to integrate with the surrounding environment will prosper, as they will aspire people to work with both the heart and the mind. The author, a ruthless economist,343 asserts that profit comes from life and therefore must support life, because “contrary to the mores of traditional capitalism, living assets [people and nature] are more

341 (de Geus 2002)
342 (Bragdon 2006)
343 (Hildebrandt December 2006)
important to the productivity and longevity of companies than nonliving, capital assets.”

Thus, living assets are the source of non-living assets. This means that in order to deliver profits, companies must create value and sustain in the long-run, which entails that investment capital flows must be aligned with sound social and environmental stewardship.

These two strong cases for sustainability are supported by comprehensive studies, which show that there is a positive correlation between the described philosophy and the lifetime of the company and its economic results.

This naturally influences the management of the company. Within the business environment, changes have occurred with greater frequency and amplitude the last 20 years, constantly leaving the company in disharmony with its surroundings. The company cannot just settle down and relax when the company’s product range, know-how and labor relations are in harmony with the world around it. Changes occur continuously and if these are fundamental enough, then the company also has to reorganize itself, as its previous, old setting is not fitted to the new conditions. In order to obtain harmony, the managers must be able to comprehend the on-going disorders in the surrounding environment.

We believe that the world is fundamentally changing these years. It has become increasingly recognized that the world is strained, as the environment is under pressure of pollution and exhaustion. Actions are needed, but why are companies and especially investors then hesitant to embrace sustainability? According to Arie de Geus, managers do not really grasp what is going-on in the macro environment, as they are not sensitive enough to emerging signals. Moreover, people are only cognitively able to understand something they have experienced previously, as well as it is hard to acknowledge what is emotionally difficult to see. These reasons can partly explain why it is so difficult for managers and investors to understand and evaluate a company in this redefined world. Possibly we are facing a shift in paradigms, leaving managers and investors without the possibility to do business as usual. Hence, new methods and ways of thinking are needed. As a crisis often is an eye opener, now could be the exact time to make crucial changes in the way companies and certainly investors perceive the value created by CSR.

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SAM: [http://www.sam-group.com](http://www.sam-group.com)
Social Accountability: [www.sa-intl.org](http://www.sa-intl.org)
Storebrand: [http://www.storebrand.no](http://www.storebrand.no)
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UNPRI: [http://www.unpri.org](http://www.unpri.org)
WEF: [http://www.weforum.org](http://www.weforum.org)

**Internal document**

Corporate positioning Spokesperson brief, Novozymes’ internal documents (confidential)
### 13.0 Appendices

#### Appendix 1 – Overview of Interviewed Experts

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<th>Organization/Company</th>
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<th>Title</th>
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<td>Business for Social Responsibility (BSR)</td>
<td>Anonymous</td>
<td>-</td>
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<tr>
<td>COWI</td>
<td>Mr. Erik Lind Olsen / Ms. AnneMarie Meisling</td>
<td>Team leader for business development and innovation /CSR Director</td>
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<tr>
<td>Domini Social Investments</td>
<td>Mr. Steve Lydenberg</td>
<td>Chief Investment Office</td>
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<td>GES Investment Services</td>
<td>Mr. Erik Alhøj</td>
<td>Managing Director</td>
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<td>Leuven Gent Management School</td>
<td>Ms. Céline Louche</td>
<td>Assistant Professor</td>
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<td>Prospect</td>
<td>Mr. Hans Henrik Munch-Jensen</td>
<td>Director</td>
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Appendix 2 – Expert Interview: Business for Social Responsibility (BSR)

Anonymous representative, www.bsr.org

June 15 2009

Looking at European countries, which countries are frontrunners in terms of implementing CSR/ESG related regulation?

There are many initiatives in both France, UK, Denmark and Germany. Companies should report from what they believe creates value for the company. It will be interesting to see if the reporting due to the legislation in Denmark will be meaningful.

Is regulation a necessary mean to improve integration of ESG into financial valuation?

It can be necessary to make specific requirement for how to report right now as we are in a transition phase, as CSR reporting is a relative new phenomenon. Regulation can help some companies move ahead, and facilitate development. Open regulation is purposeful, whereas it becomes a problem if regulation is very narrow.

According to BSR, how to do advice pioneer companies in working strategically with CSR to communicate to investors?

It is more a question of whether it is the channel or what is communicated that is a problem. I don’t think there are more efficient communication channels than investor relations and road shows. Novozymes is better than average in communicating.

What does the future look like in term of integrating ESG factors into existing/slightly modified financial performance measurements?

The question is really if CSR should be quantifiable? Is marketing or organisational set-up measured? Climate is to a greater extent being measured in terms of carbon emissions. A lot of what companies are doing within CSR would never be quantifiable in a meaningful way. And it should not be done at any price. The companies have to be better at communicating with investors – why is this an essential part of the company’s strategy? For the way the company is managed and is operating – and a clear strategy is important to investors – a driver that should be considered even though it is not quantifiable. It is important to distinguish between what can and what cannot be quantified, but it should still be considered in order to construct a holistic picture of the company and its opportunities for development and growth. The companies should make the connection from e.g. human rights initiatives to the company strategy.

How should companies work with CSR in order to generate the most value? Is it to work strategically with CSR?

Not all CSR is eligible to being strategic e.g. working environment. But yes all CSR should be strategic for it to be acknowledged and valued by investors.

What does the future look like in terms of obtaining a mutual understanding of the value of CSR for companies and investors?

There should not be so much focus on quantifying things all the time. Considering the case of BP in Texas, there are risks of e.g. fines – a risk that can be considered by investors although in very different ways.
Some things are hard to communicate in a meaningful way. Therefore it is better to communicate verbally how the companies CSR initiatives support the corporate strategy. For some companies e.g. pharmaceutical companies, legitimacy is important. CSR is so many things and that is also what makes it hard for the investors. Many companies are not able to communicate in an efficient way in which their CSR initiatives and strategy are linked except in a very superficial way.

How about related to Novozymes?

Novozymes wants to create opportunities. They deliver great results, so it is ok that their CSR is not quantifiable. Novozymes task is two find out where their CSR contributes to their financial results or increased market share. For a company like Novozymes it is hard e.g. when choosing a supplier to estimate how much CSR counts as a criterion. Investors do not put everything into models – some is written evaluations. Novozymes’ process is efficient e.g. they limit their water consumption, which indicates good behaviour. Investors then estimate the risk of increased water taxes.

Are the findings from the BSR report from 2008: ‘ESG: Moving to Mainstream Investing?’ still valid or has something changed in terms of investors interest in integrating ESG data?

The conclusions are still valid. CSR is very much a matter of education. Punish-treat examples of companied helps investors put more emphasis on ESG factors. Also the whole debate about climate change is opening inventors’ eyes. So things have not changed much, but we are moving in the right direction.

Has BSR experienced a higher demand for advisory services on CSR?

A small working group has settled to discuss the same problem as the report is addressing as they thought the problem is very relevant. Given the economic climate many companies do not have the budget to do much right now, but they do have the interest meaning they do not save money in the short term and then giving up on their long term targets. In sum, not more interest than usual. The question is how well companies CSR is linked to communication and investor relations' people – it is probably not so well in general. The whole company has to be internally aligned and share the same notion of what is important. Some companies have huge barriers between different departments. Hence the CSR department is not necessarily representative for what the company as a whole thinks – but more what the particular department thinks and hopes. Even in Novozymes, sustainability has only been really considered in the sales department for the past 2-3 years. The CSR and investors relations departments do often not educate one another. And Novozymes are even good at this.

Has the current financial crisis had a positive or negative effect on investors’ considerations of ESG factor?

For the companies CSR do not get less attention than anything else – not even in the budgets. Because of COP15 climate gets a lot of attention. The companies cannot afford to stop their CSR initiatives, as they are long-term. BSR do not advise investors. But they know some investors say screening is ok but they need to understand more hence screening is not sufficient any more. There is a need for a better understanding. But the demand is not that big. Large investors have the competencies internally to consider ESG factor. But the integration is not good. ESG factors are not considered, as the ones with the responsibility for the accounts do not consider them. Otherwise BSR are too little in contact with investors to say anything about the level of demand of CSR services. Regarding the buy-in from investors that CSR is important many reports besides BSRs says the same: That there is (a verbal) buy-in, but not in practice. It is all about how to make
it important. Talking about CSR in very broad terms is problematic. Both companies and investor must make it important.
Appendix 3 – Expert Interview: Prospect

Mr. Hans Henrik Munch-Jensen, Director, www.prospect.dk

June 8 2009

What is your view on value creation and CSR?

The key discussion evolves around CSR vs. the exel sheet – it is not a match due to lack of standard. There exists no standardization of data which is the only way to compare companies’ CSR work from an investor perspective. The investors are starting to get the message, but companies have not succeeded in communicating their CSR initiatives towards analysts. For analysts time is a scarce ressource.

GRI is a valid reporting tool for companies, I think it is a good starting point to report on CSR, which can be helpful in evaluating CSR reporting. GRI is a really good working tool because the company can chose what factors to report on according to the business model. However, investors and analysts do not know GRI and therefore not use it. If more companies made use of GRI, then investors and analysts would be aware of the tool. Instead investors and analysts buy the CSR information externally from screening agencies, only few have the resources to do the research in house.

Novozymes is a frontrunner within working with CSR but how can they improve their communication towards investors? According to me, it’s a problem that Novozymes is so skilled within CSR reporting due to the fact that their investors have not developed the skills yet. No education of investors of value of CSR is an important reason for the lack of expertise, it requires a new generation to change the mindset.

Society will develop towards being more conscious about the social and environmental element, therefore the investors will have to acknowledge the importance of CSR too.

Does investors make the division of CSR about product related/acting responsible?

The extra CSR work where the company acts beyond regulations and minimum standards will result in new standard settings. CSR does create value for investors solely in the form of quantifiable factors, this is the investors only focus. Instead companies should place more emphasis on innovation in order to develop processes and products that really make a difference for future demands. CSR will always be about both risk minimization and growth opportunities. To this date innovation is only included in a valuation when the final product is developed and has been given a value.

Do we need to integrate ESG factors into existing model or do we need something new?

I think the future scenario of integrating CSR into investment decision-making will require something new. However, the development on the short-term will be made through reporting frameworks. The two existing models (single and dual decision models red.) is not sufficient because it’s a snap-shot.

According to Prospect what are the current trends in CSR and SRI development?

Denmark: an inevitable development, more focus is being placed on CSR, especially on climate change. The main driver of the Danish development within CSR in a investor perspective is that companies are being contacted on a daily basis by foreign investors about their CSR practices.
Thus there is a strong demand from abroad but no demand from Danish actors that are far behind in terms of including CSR into evaluation processes. Analysts do not really care.

UK: Much emphasis has been on SRI since the 80s and the 90s where the public agenda has been influenced by a societal discussion on business and responsibility.

Sweden: has seen a much different development within the area compared to Denmark due to the industrialized nature of the business community which was stock-based much earlier because the companies went international and thereby were forced to adapt to global demands.

**What trends does Prospect see in general?**

The majority of Danish companies are reactive in terms of a 'we have to' mentality. They do not have the processes in place to enable sound reporting, which will result in CSR reporting of low quality. The only reason why we see an increase in companies' interest in CSR reporting is due to the new law.

The traditional approach to CSR from a company perspective is based on: reputation, image, brand. In this approach it is important to keep a proper facade with no major cracks. It is clear that companies that want to obtain value for acting responsible must get away from the traditional risk minimization approach.

One of the biggest challenge for companies that want to change their approach to CSR is to ensure support from top management level that most often will seek to fend off risk instead of searching for new opportunities. In times of crisis, the focus is on cash flows and working capital.

When we talk with our clients about strategic CSR the companies do not have any ambitions or goals. Most often other things as the product or production is the most important things to get up running, then efficiency optimization will first happen thereafter which is most more expensive. Here CSR is an add-on which originates in a reactive approach that favors risk minimization. I think that the new law on CSR reporting will help lift the lower level and thereby create awareness. Regulation is not a problem for companies as long as it is equal for all.

Our company had expected a much larger interest in CSR and reporting in the light of the new law but part of the reason of why this did not happen is the economic crisis, which forces companies to put their CSR ambitions on hold. The ones who are active are the ones that are already active such as biotech and pharma companies. Other industries have enough trouble with just surviving.

Banks are somewhat more sophisticated in terms of CSR reporting where some banks started to report on value-based parameters 10 years back. However, the time was not ripe and they did not achieve to benefit as expected in terms of recognition from customers and society. Today, Danske Bank is very good at reporting on their sustainability factors, they have managed to incorporate responsibility into their business model, which is a necessary mean in that sector when things go bad as currently is the case.

**What has the impact of UNPRI been so far?**

A clear trend is that investors are starting to sign the UNPRI, this trend is mainly driven from abroad. In the future pension funds and banks can not afford not to offer social responsible investments. Analysts and investors do not have a systematic approach in their screening practices and stock selection. What relates to under or overperformance of SRI funds, I think that a fund of selected stocks by positive screening methods can perform as good as conventional funds. The reason that we do not have more SRI funds here in Denmark is that in bad times people go back to basic and only demand return on investment. In addition, it costs to do the needed research, to screen and to do the stock selection.
CSR taken into account in investment practices – a way out of the crisis?

I think the CSR discussion needs a breakthrough in terms of new innovation. Companies will of course say that CSR is still a priority but the real question is what is actually being done? Recently, I can not think of any revolutionary development in reporting practices among Danish companies. The companies who do a good job are Danske Bank, A.P Møller (is starting up), Danisco, Novo Nordisk, Novozymes, Chr. Hansen, ALK, Carlsberg, Dong and Vestas. I think that CSR is on the companies’ agenda but it takes much more to really change the company’s integration of CSR into their business practices.

How can NZ benefit more from their sustainability work towards investors?

It is a difficult question because they are frontrunners and constantly trying to improve their practices. However, where I think the CSR work really creates value is in the innovation processes.

I believe that Novo Nordisk, and thereby also Novozymes, are struggling with heavy internal processes. Novo Nordisk is on the one hand a story of intimidation and on the other a perfect picture. Then the argument is that we do it because it makes sense within being able to prove the real value added. Novo Nordisk has really succeeded in participating in the social debate which is helping them now in the Food for Oil crisis but it is no secret that a large internal system has been developed in order to make such an approach is possible. Overhead is for sure there in terms of unregularities in production processes but the underlying organizational structures are really hard to change.

When changes such as a new CSR approach are made it requires huge internal costs which can stop new development opportunities. You have to be real attentive towards what new changes mean to your internal processes.
Appendix 4 – Expert Interview: GES Investment Services Denmark

Mr. Erik Alhøj, Managing Director, www.ges-invest.com

March 4 2009

When GES Denmark started in 2001 there was nothing to do in the Danish market. GES was a direct competitor to SAM. Today we screen about 4000 companies in the MSCI, and advice assets under management worth Euro 345 billion.

Investors sign the UNPRI as they believe there is a shift of paradigms as CSR is becoming increasingly important. Hence investors work to implement sustainability in their investments. Institutional investors are ahead when it comes to SRI. There are not many funds for the regular Dane as he/she has not yet discovered SRI: Denmark is in general behind when it comes to making SRI.

GES characterizes SRI as responsible or sustainable investments and hence not ethical investments.

There are two parallels:
1. Compliance (licence to operate), not focusing on returns
2. Extra financial value (return oriented, extra value-add) e.g. the car industry, which considers the environment.

Versus:
1. Risk-oriented, minimizing the risk premium (negative way of selecting stocks)
2. Opportunity-oriented (positive way of selecting stocks)

There is a codex on how to behave as an investor and UNPRI is the most important driver within this area. The principals contain concrete methods that all investors know and understand. Hence it is a lever that raises the lower barriers.

Screening of portfolios happens after a gap-analysis. This is done in order to find out what the company needs to do in order to sign the 6 principals of PRI.

GES has two kinds of tasks: 1) evaluating the asset manager, 2) evaluate a specific company on behalf of an investor.

GES’ services for investors:
- 1: Classic screening (negative and positive) ‘old view’
- 2: Compliance with international norms and standards: Twice a year the companies are investigated to secure it is complying with international conventions (UN Global Compact, ILO, OECD). 31 companies of 2000 surveyed by GES are in a ‘hard-core’ list. Before is comes to the public that there is an issue, documentation has to be 200% valid. Before the company gets ascribed to the ‘hard-core’ list it gets on an ‘observation list’. The blacklist is not made public, as that would create trouble for the companies on the list.
- 3: Engagement and active dialogue (reaction to step 1+2). Not to prosecute the company but to find a solution all together.
- 4: Extra financial value. The future risks and opportunities are important. GES has a matrix of risks (a risk rating) as well as the ‘Nordic Sustainability Index’ (based on best in class), based on many of the same factors as the DJSI.
- 5: Thematic sector focus: (not sold in DK). The newest initiative focusing on e.g. the water sector.
There are several analyses saying it does pay off to engage in SRI as well as it is common sense.

Companies have to ask themselves: ‘What I am doing, does that create respect and trust among my stakeholders?’ To have ethical standards and be stakeholder oriented is equally important.

If have to forecast the development for social responsibility in 2008-2020: Do what the stakeholders demand (to a reasonable extent of course) – be in balance with them.

GES has a stakeholder approach therefore transparency of companies that we investigate is crucial.

Investors wanting to engage in SRI often outsource the task related to social responsibility. They rarely do it themselves.
Appendix 5 – Expert Interview: COWI

Ms. Annemarie Meisling, CSR Manager & Mr. Erik Lind Olsen, PPP Consultant

May 27 2009, www.cowi.dk

According to you how does companies view CSR – as top-line instead of bottom-line savings?

*Annemarie:* IFC (project financing) has developed the Performance standard II, a screening tool to manage social and environmental risks and impacts and to enhance development opportunities. Today known as the Equator principles. IFC made an analysis about if it had turned down proposals from firms due to bad ESG performance or due to bad financial performance. It turned out to be an exact coincident of both dimensions. I’m convinced that a bad ESG performance is an early warning that the company will experience bad financial performance. If the management does not manage the early warning indicators, it can have really severe consequences later on.

*Annemarie:* I think that it has started to become legitimate to think long-term instead of short-term return on investment. In addition, I believe that there is lack of expertise in the investor community about SRI opportunities. There seems to be more focus on this outside of Denmark, in UK for example.

What drives the CSR development?

*Erik:* Regulation is of vital importance, government regulation is what starts and ends a development.

*Annemarie:* I have a different view. I think that companies cannot afford not to engage in CSR, as customers, employees and the overall society are demanding action. It is within the last ten years that the risk management approach really broke through.

*Erik:* Changes usually happen through burning platforms. The long-term compliance way of thinking is starting to get a foothold in the Danish business community, however only among the few. The investors are taking part in the development too in form of questionnaires.

*Erik:* It is hard for companies that do not make enzymes that have a positive impact on the environmental agenda – if you are producing very physic commodities you have to figure out how you can relate to the global CSR discussion.
Appendix 6 – Expert Interview: Steve Lydenberg & Céline Louche

Mr. Steve Lydenberg, CIO, Domini Social Investments & Ms. Céline Louche, Assistant Professor, Vlerick Leuven Gent Management School, Belgium


What could a new model consist of? (Explanation of the two models: single, binary/dual – and our vision of a hybrid model).

Louche: It has been one of the objectives of the EU Lab, Market Valuation of Non-Financial Performance (http://www.investorvalue.org/home.htm) -- looking for a matrix to integrate the different dimensions. Although they have come up with a useful framework that hopefully will contribute to a better communication between companies and investors on ESG issues, the matrix is still missing. Can ‘a’ matrix be developed? There is lots of debate about this question. It is very difficult to develop something new. Sometimes financial analysts and SRI analysts do not talk together even though they work in the same bank. They have different training – two different communities. I do not think such a model exists today.

One person cannot understand the company as a whole and that is what you are asking. It is too much information. Time is a problem, as the analysts do not have time. They cannot handle the ESG information and they do not know what to do with it. Also there are no incentives in the remuneration system that gives financial analysts incentives to include ESG factor in an analysis.

Regarding demand for SRI, here is not so much marketing on responsible investment, so the clients do not ask for it.

Lydenberg: Let me explain Domini’s investment philosophy:

Business Model – contribution to society

\[+\]

Vaccine

Generic Drugs

Patented Medicine

Stakeholder relation

Buy
Business Model: The business line it is—naturally agrees with Domini’s standards e.g. Pharma—see figure. Looks like a similar model by another company. (Micro/Macro). Artificial distinction between the two axes—does not work all the time. But it helps.
Deliberately separate Social screens (Domini) from stock picking (firm: Wellington—financial data). Domini approves around two third. Wellington, quantitative, outperforms the market in a 6-18 month period (short term but managers are often measured that often). What Domini does is long term. If the stock analysts were truly long-term the two separate functions could be combined.
Sub-optimizing on the short-term in favour of the long-term? Not even short-term underperformance—SRI does not hurt.

2 years are long term. Not Domini’s fault of underperformance in our portfolio. All quantitative managers did bad in August 2007. Both have to work in order for it to work. Social screening does work. But will not help that much either. But it adds value to the society outside the stock market so why not do it?

What’s next in terms of the development of social screening?

Louche: there is lots of interest from the financial community. Climate change is integrated into the valuation models. Do not know if ESG will become integrated. Maybe some if the things will become a norm. There is a difference between an old and a new generation of financial analyst. ESG maybe integrated, but maybe the model will not be changed— it will be squeezed in. Short-termism is not questioned. Hence ESG might never be integrated.

Lydenberg: UNPRI engagement with companies will be more and more practiced. Analysts will have to look at it—it may not help, but it is a duty to read everything that is in the annual report.

Louche: Quantitative reports are influenced by ESG factors.

Lydenberg: hopes to find companies that are forward looking and better by using their investment philosophy. Some investors may do the same but call it ‘management’. It can be a proxy standard for the quality of management.

What are the major drivers for investor to take CSR into account?

Louche: Many initiatives — ratings, communication towards the financial community. Becoming more important. More ‘talk’ in the news etc. Legislation and regulation will also have an impact.

Lydenberg: customer demand (that is what Wall Street does) and regulations (less effective in driving true change—good to create ‘cultural’ change)

Louche: An example is a the new French law. Corporations pay more attention. Not many proactive companies—many just obey the minimum standards.

Externalities:

Lydenberg: Externalities = What the market does not account for. Is it possible to incorporate into financial analysis? Dangerous to incorporate externalities into stock price as stock price are short term. And then externalities will also be short term—not good.
All investors tend to pay more attention more attention to negative externalities. More risk focused than opportunity focused. Social investments should pay more attention to opportunities (e.g. a company is training its workforce = skills that can be used elsewhere)
What cannot be incorporated in stock price is an externality.
You want to run your business in a financially responsibility but keep an eye on externalities even though it cannot be linked to profit this year. Not valuing only on price but also on what the company contribute with to society outside of the market.

The next step: Not to integrate, but a deliberate action of splitting them. Companies should report on externalities – the value created to society outside the market. A split between externalities and business financials. It can create a bubble if all invest. But externalities should be considered.

Louche: Regular valuation in a predefined long-term perspective.

Lydenberg: Short-term value always comes at someone else’ expense – long term does not. Externalities are crucial in this discussion.

Louche: Corporations’ could persuade the investors what the externalities means.

Lydenberg: Novozymes: As long as it is an (positive) externality they will not be rewarded in the stock market (but somewhere else). A part of the stock market (SRI) will. Novozymes is rewarding their suppliers – and hope that they themselves will be rewarded. The market place does not reward companies (like Novozymes) right now. Cultural change is needed. More people have to do this.

Louche: No direct reward – as there are direct results.

Lydenberg: I hold faith in that there is a long-term reward – companies have to be patient. Easier to say that externalities are separate. Real estate (tangible) analogy – maintenance or not.

What do you think about the living company analogy?

Lydenberg: Like it, much be more concrete. Must be organically related.

Louche: Company can be sustainable but not make society be sustainable. Must consider how to contribute. Must be in harmony with society.

Company KPIs and society:

Lydenberg: Companies tend to do one or two things well – that goes for externalities as well. Decide what benefits to bring to society. KPIs for the benefit of the society.
In the end companies need a license to operate from society. Companies can only exit if they have a license to operate. Companies are not just expected to create value for shareholders, also create value for society.

Lydenberg: Companies’ abilities to innovate are important – only companies know best how it can do that.

Louche: Ratings fail in rewarding innovation. Maybe ratings are simplifying things – but things are not simple. Innovation needs to be awarded – a prize can do that.

Lydenberg: Price for innovation (independent organization). Identify the leaders (set new standards).

Louche: But what is a good innovation? Not all innovation is positive.
Appendix 7 – Notes from Lunch-meeting at Center for Corporate Governance, CBS

May 18 2009

Present: Mr. Steve Lydenberg (CIO Domini Social Investments), and Ms. Céline Louche (Assistant professor Vlerick Leuven Gent Management School, Belgium).

Current CSR reporting:
Lydenberg is currently working on an article off how to read a CSR report. Many great reports are published but there is no guideline of how to read it. Lydenberg has a thesis that CSR is too valuable. A problem is there are too many audiences and different messages are targeted at different stakeholders. More detailed communication is needed to an even broader range of stakeholders.

Louche believes there is a need for something different than CSR reporting in order for it to be understood and believed by investors.

KPIs:
KPIs should be defined by the companies themselves as they ask themselves, what are the key issues?
The problem with standardized reporting is that companies figure out how to look good as the reporting can’t capture innovation. The company must come with what is best for them on their own.

The next frontier:
The next frontier within CSR reporting should be approached by both investors and companies. It could possibly include a ‘matrix’ for returns that are not financial – and here ‘matrix’ may not be the right word. A new vocabulary is needed of words and not numbers. The questions ‘What is a corporation? And for what purpose?’ should be asked.
There is a tension between integrating ESG into valuation and developing something new.
Short term vs. Long term is another to talk about the same thing

Business role in society:
Companies should as themselves what are their roles in society? If CSR becomes a standard procedure then it becomes a way of avoiding nasty questions.
One point of CSR is to encourage debate of thin (e.g. nuclear power) in society. Ratings are not sufficient.

SRI impact:
Where does SRI make the most impact? Impact = social change.
SRI has increased CSR reporting and increased the debate of corporations’ purpose.
SRI investors can be seen as entrepreneurs within the financial community.

Short term financial focus does not guarantee you long term financial success. Being right on social issues does not give/guarantee you success on financials. You have to guess a lot in business.

Trends:
The Economist article shows hat companies are slacking on CSR initiatives and activities.
Michael Porter has worked with the EU on integrating CSR with business.

Supplier code of conduct:
Does the companies invest in their stakeholders? Yes, companies will create strong relationships.
The financial crisis:
CSR = buying assurance with the stakeholders. Gives better license to operate (e.g. among employees) and the companies have a 'longer lease'
Lydenberg is convinced and you invest in your stakeholders you will win in the aggregate.
Appendix 8 – Interview Questions for Investors & Analysts

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<tr>
<th>Question</th>
<th>Details</th>
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<td>1. Can you briefly tell me how you make a valuation of Novozymes?</td>
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<td>2. Are any of Novozymes ESG factors considered in this valuation?</td>
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<tr>
<td>- Why? Why not?</td>
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<tr>
<td>- What are the pros and cons of doing a valuation this way?</td>
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<tr>
<td>3. If yes, how are the ESG factors considered?</td>
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<td>- Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?</td>
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<td>- Is the service of including ESG factors bought from an outside service provider/screening agency?</td>
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<tr>
<td>- What services are bought? (Negative screening, positive screening, divesting, stakeholder engagement)</td>
<td></td>
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<tr>
<td>- How is this valuable to your valuation?</td>
<td></td>
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<tr>
<td>4. How can Novozymes ESG factors possibly be included in a valuation?</td>
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<tr>
<td>- Which methods can you think of?</td>
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<tr>
<td>- What does this require?</td>
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<tr>
<td>5. We have identified at least two ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways?</td>
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<tr>
<td>- If yes, which way?</td>
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<tr>
<td>6. What ESG factors do you believe can give Novozymes superior value?</td>
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Appendix 9 – Description: Drivers of Social Responsibility

COMPANIES
Guidelines for companies
One of the most important guidelines for companies in this context is the UN Global Compact\(^{348}\), launched in July 2000 by United Nations Secretary-General Kofi Annan, as an international voluntary corporate citizenship initiative. The compact is a vital driver for CSR reporting as it offers companies a starting point in addressing CSR issues internally and in public. The compact is based on ten principles in the areas of human rights, working conditions, environment, and anti-corruption. More than 5100 companies have signed the compact.\(^{349}\) Compliance with the UN Global Compact involves corporate self-reports. There is no assessment mechanism, which has lead to wide criticism.

The Global Reporting Initiative, GRI\(^{350}\), is another guiding set of indicators, which help companies to produce useful reports on its economic, social and environmental performance by identifying issues of most importance to the company and its stakeholders. First published in 2000 and then revised in 2002, the guidelines have now entered their third generation, referred to as the GRI G3 Guidelines, which were released in October 2006. Currently, the guidelines are used by more than 1000 organizations worldwide.\(^{351}\)

Conventions
The Organization for Economic Co-operation and Development, OECD, is responsible for conventions that concern environmental, social, governance, economic and sustainability issues, which the 30 western member countries are obliged to comply.\(^{352}\) The UN specialized agency International Labour Organization, ILO, promote rights for decent working conditions. The list of member countries presently counts 183 countries.\(^{353}\)

Management Standards
The environmental system issued by the International Organization for Standardization (ISO) known as ISO 14001\(^{354}\) launched in 2004 is by far the most widely used system by corporations. ISO is currently developing a voluntary Guidance Standard on Social Responsibility, ISO 26000\(^{355}\),

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\(^{348}\) UN Global Compact: [http://www.unglobalcompact.org/AboutTheGC/](http://www.unglobalcompact.org/AboutTheGC/) (13.06.2009)

\(^{349}\) UN Global Compact: [http://www.unglobalcompact.org/AboutTheGC/](http://www.unglobalcompact.org/AboutTheGC/) (13.06.2009)

\(^{350}\) GRI: [http://www.globalreporting.org/Home](http://www.globalreporting.org/Home) (13.06.2009)

\(^{351}\) GRI: [http://www.globalreporting.org/Home](http://www.globalreporting.org/Home) (13.06.2009)


\(^{353}\) ILO: [http://www.ilo.org](http://www.ilo.org) (19.07.09)


\(^{355}\) (Bartels 2008)
which will be launched in 2010. Although, the ISO 26000 is not going to be a certification standard, ISOs dominant position will make it important for companies not to be delisted for not communicating on process with the standard.

The SA 8000\textsuperscript{356} is developed by Social Accountability International (SAI) and started in 1998 a standard for working conditions. The SA 8000 is based on the United Nations Universal Declaration of Human Rights, the Convention on the Rights of the Child and various International Labour Organization (ILO) conventions.

**Assurance Standards**

International Standard on Assurance Engagements, ISAE3000\textsuperscript{357}, was established in 2003 to address ethical requirements such as quality control, documentation, and preparing assurance reports. Another widely used assurance standard by companies is the standard AA1000\textsuperscript{358} introduced by the non-profit organization AccountAbility, which recently has been reissued.\textsuperscript{359}

**Auditors**

PriceWaterHouseCoopers, PwC\textsuperscript{360}, KPMG\textsuperscript{361} and Deloitte\textsuperscript{362} are all audit houses that assist and advice companies on their CSR strategy and reporting process. All of the three have conducted research on CSR trends such as reporting and regulation. KPMG conducts a worldwide yearly study on CSR reporting trends, and PwC has been very active in the light of the new Danish law that oblige about 1,100 companies to report on their CSR practices.

**BOTH – COMPANIES AND INVESTORS**

**Organisations**

Moreover, there are a number of agents that work with both companies and investors on social responsibility. The UN in terms of the UNEP FI, United Nations Environment Programme Finance Initiative,\textsuperscript{363} the WEF, World Economic Forum\textsuperscript{364}, and the WBCSD, World Business Council on Sustainable Development\textsuperscript{365} all work pro-actively with both companies and investors to finds sustainable solutions for the future. The UNEP FI’s raison d’être explains these organisations

\textsuperscript{356} Social Accountability: www.sa-intl.org (19.07.09)
\textsuperscript{357} International Auditing and Assurance Standards Board (IFAC): http://www.ifac.org (19.07.09)
\textsuperscript{358} AccountAbility: www.accountability21.net/aa1000series (19.07.09)
\textsuperscript{359} (Sørensen, Preben J.& Nielsen, Ena 2008)
\textsuperscript{360} PwC: http://www.pwc.com (19.07.09)
\textsuperscript{361} KPMG: http://www.kpmg.com (19.07.09)
\textsuperscript{362} Deloitte: http://www.deloitte.com (19.07.09)
\textsuperscript{363} UNPRI: http://www.unepfi.org/ (12.06.09)
\textsuperscript{364} World Economic Forum (WEF): http://www.weforum.org/en/index.htm (18.06.09)
\textsuperscript{365} WEF: http://www.weforum.org/en/index.htm
engagement on social responsibility towards companies and investors very well: “to develop and promote linkages between the environment, sustainability and financial performance.”

Business for Social Responsibility, BSR is an organisation consisting of a global network of more than 250 companies. It works to develop sustainable business strategies and solutions through consulting, research, and cross-sector collaboration. A similar organisation, CSR Europe, is a European network assisting companies in integrating CSR into their everyday business operations by facilitating knowledge sharing and innovation. AccountAbility is another such organization albeit with the scope of promoting accountability innovations for sustainable development.

The Association of British Insurers, ABI, is active in doing research within the field of sustainability and has among other things published the Disclosure Guidelines on Socially Responsible Investment in 2004.

Moreover there are a number of investment organisations and associations that does not have social responsibility or the like as main focus areas, which albeit still contributes to the driving forces of social responsibility by occasionally investigating the development of investors ESG considerations. Effas, The European Federation of Financial analyst Societies, and the German member organisation, DVFA, is one such example as they have made an effort, albeit less innovative, to develop sectors specific KPIs for ESG data.

The largest and most powerful one is Eurosif, European Investment Forum and its American counterpart, SIF, Social Investment Forum. Moreover, there is a Canadian, Asian and Australian Social Investment Forum. Under Eurosif are seven national SIFs and a Danish SIF (Dansif) is under development. The pan-European organisation works to address sustainability through the financial market. It is a non-profit organisation with member affiliates such as pension funds, financial service providers, academic institutes, research associations and NGO’s, representing assets over € 1 trillion.

Indices

Among the most dominant indices is the DJSI, Dow Jones Sustainability Index(es), which has just reached its 10th year of existence. It tracks the financial performance of leading sustainability driven companies and provides asset managers with benchmarks to manage sustainability portfolios. There are presently 70 DJSI licenses held by asset managers, managing more than $8

366 (UNEP FI (North American Task Force) 2008)
367 BSR: http://www.bsr.org/about/how-we-work.cfm (21.06.09)
368 CSR Europe: http://www.csreurope.org/pages/en/about_us.html (11.06.09)
369 AccountAbility: http://www.accountability21.net/default2.aspx?id=54 (13.06.09)
370 Association of British Insurer: http://www.abi.org.uk/ (14.06.09)
371 EFFAS: http://www.effas.com/ (20.06.09)
372 EUROSION: http://www.eurosif.org/ (12.06.09)
billion.\textsuperscript{373} The \textbf{FTSE4Good} index series also aims to facilitate investment in companies meeting recognised corporate responsibility standards by measuring their performance. In cooperation with EIRIS companies’ corporate responsibility performance is researched, among others by means of questionnaires. In order to use the indices, a license must be bought, from which all profits are donated to UNICEF.\textsuperscript{374} Besides global indices there are also less extensive indices. In the Nordic, the \textbf{OMX GES Indexes}, created by GES Investment Services and NASDAQ OMX, provide investors with opportunities to compare the yield of responsible investments against a benchmark by calculating an index family of sustainability and ethical indexes on the Nordic markets.\textsuperscript{375} There is also an index focusing on small companies CSR performance, \textbf{The Kempen SNS Smaller Europe SRI Index} that is derived from the HSBC Smaller European Companies Index.\textsuperscript{376}

\section*{Recognitions}

One such is made by \textbf{sustainablebusiness.com}. By making a distinction between Green Pioneers (companies that produce green products/services) and Corporate Pioneers (companies with conventional products/services that are greening their operations and product lines) they evaluate a number of companies and select 20 companies that they believe are the most social/green stocks of the year. The purpose is not to make a ‘buy-list’ for investors, but more to provide an overview and give recognition to companies doing an outstanding job, inspiring other companies to engage in sustainable business.\textsuperscript{377} \textbf{Storebrand}, a Norwegian insurance company, has also made a listing of companies they believe are Best-in-Class in leading environmental and social performance and thus are eligible for their long-term investments.\textsuperscript{378} Another recognition is made by the well known \textbf{Forbes} Magazine, who, among their listing, have a list of the most sustainable companies, named ‘100 Corporations That Will Survive 100 Years’.\textsuperscript{379} Similarly \textbf{Ethisphere} Magazine makes a list each year including the worlds 100 most ethical companies.\textsuperscript{380}

\section*{INVESTORS}

\subsection*{Guidelines for Investors}

The largest and most powerful player within this cluster is undoubtedly the \textbf{UNPRI} with the global outreach and a very wide scope of developing guidelines embracing all ESG factors. The United Nations Principles for Responsible Investments launched 6 principles in 2006 as a set of best

\begin{footnotesize}
\begin{itemize}
\item\textsuperscript{373} FTSE4Good: \url{http://www.ftse.com/Indices/FTSE4Good_Index_Series/index.jsp} (18.06.09)
\item\textsuperscript{374} GES Investment Services: \url{http://www.ges-invest.com/pages/?ID=73} (19.06.09)
\item\textsuperscript{375} Kempen: \url{http://www.kempen.nl/Corp_Doelgroepcontent.aspx?navid=2&desc=1&id=4909&ItemID=4909} (15.06.09)
\item\textsuperscript{376} Sustainable Business: \url{http://www.sustainablebusiness.com/index.cfm/go/news.feature/id/1579} (12.06.09)
\item\textsuperscript{377} Storebrand: \url{http://www.storebrand.no/site/stb.nsf/pages/bestinclass.html} (22.06.09)
\item\textsuperscript{378} Forbes: \url{http://www.forbes.com/2009/01/28/long-lived-companies-leadership_0128_sustainability_2.html} (21.06.09)
\item\textsuperscript{379} Ethisphere: \url{http://ethisphere.com/wme2009/} (11.06.09)
\end{itemize}
\end{footnotesize}
practices for responsible investment, to which 362 institutional investors worldwide adhere to, comprising more than $14 trillion in assets under management, becoming a global benchmark.\textsuperscript{381}

The CDP, Carbon Disclosure Project, on the other hand, has a worldwide scope also, but a more narrow focus on carbon disclosure methodology and process. It has the largest database of corporate climate change information in the world and the scope is to measure the carbon emissions of the 3700 respondent organisations to motivate action to prevent climate changes “because in business what gets measured gets managed”.\textsuperscript{382}

**Screening Agencies**

There are several of these screening agencies, among them, EIRIS, Ethical Investment Research Services, which actually is a not-for-profit organisation, provides independent research into the social, environmental and ethical performance of companies, but also works collaboratively with other bodies to promote and publicise the concept of ethical or socially responsible investment.\textsuperscript{383}

The Swedish GES Investment Services is another research and service provider for responsible investments that help companies, investor and the world around to enhance sustainable development. This is done, in short, by supplying investors with information on companies, more specific on their ESG factors, to help make more informed investment decisions.\textsuperscript{384}

Likewise Ethix\textsuperscript{385} and Oekom Research\textsuperscript{386} helps institutional investors and asset managers integrate ESG issues into the investment process. KLD Research & Analytics also provides similar research but has also developed an index, among them the KLD Domini 400 social index, the first index constructed using ESG factors launched in 1990.\textsuperscript{387} The index is made in collaboration with Domini Social Investments\textsuperscript{388}, an investment firm specializing exclusively in social investments.

**Innovest Strategic Value Advisors**, which is now a part of the Risk Metrics Group, is a provider of extra-financial research for the investment community, which seeks to integrate sustainability and finance by identifying non-traditional sources of risk and value potential for investors.\textsuperscript{389} Among their asset management partners are The California Public Employees’ Retirement System CalPERS, an agency that manages pension and health benefits for more than 1.6 million California public employees, retirees, and their families.\textsuperscript{390}

\textsuperscript{381} UNPRI: http://www.unpri.org/ (12.06.09)
\textsuperscript{382} Lord Adair Turner, Chairman Financial Services Authority, Carbon Disclosure Project: http://www.cdproject.net/aboutus.asp (12.06.09)
\textsuperscript{383} EIRIS: http://www.eiris.org/ (12.06.09)
\textsuperscript{384} GES Investment Services: http://www.ges-invest.com/pages/?ID=102 (14.06.09)
\textsuperscript{385} ETHIX: http://www.ethix.se/ (14.06.09)
\textsuperscript{386} OEKOM Research: http://www.oekom-research.com/index_en.php (15.06.09)
\textsuperscript{387} KLD: http://www.kld.com/ (15.06.09)
\textsuperscript{388} Domini Social Investments: http://www.domini.com/ (17.06.09)
\textsuperscript{389} Innovest Group: http://www.innovestgroup.com/ (14.06.09)
\textsuperscript{390} Calpers: http://www.calpers.ca.gov/index.jsp?bc=about/home.xml (12.06.09)
Asset Managers

The list of asset managers is obviously infinite, but here are some that stand out in terms of showing ‘best practice’ within social responsibility.

Sustainable Asset Management, SAM, is an investment group focused exclusively on Sustainability Investing. SAM compiled one of the world’s largest sustainability databases and analyzes over 1,000 listed companies annually and it has partnered with Dow Jones Indexes and STOXX Limited for the publication and licensing of the globally recognized Dow Jones Sustainability Indexes (DJSI).\(^{391}\) Goldman Sachs has developed GS Sustain which is a global equity strategy that brings together ESG factors, broad industry analysis and return on capital to identify long-term investment opportunities.\(^{392}\) Some of their research has been made publicly available. Hermes, a UK based asset and pension fund manager, has taken an exceptional long term view focusing on responsible investments and sustainability.\(^{393}\)

\(^{391}\) SAM: [http://www.sam-group.com/html/about/portrait.cfm](http://www.sam-group.com/html/about/portrait.cfm) (14.06.09)
\(^{393}\) Hermes: [http://www.hermes.co.uk/abt_why_do_bsns_with_us.aspx](http://www.hermes.co.uk/abt_why_do_bsns_with_us.aspx) (14.09.09)
Appendix 10 – Ownership Structure in Novozymes

Appendix 11 – Novozymes’ ESG Initiatives and Recognitions

Environmental, Social and Economic Issues in Novozymes

Novozymes is systematically addressing environmental, social and economic or so-called governance issues by addressing various issues.

Environmental Issues

The current top issues in Novozymes regarding environmental and bioethical issues are (1) genetic engineering and GMO, (2) animal testing, (3) climate change, and (4) bioethanol.

(1) Novozymes makes strong efforts in informing stakeholders about use of genetic engineering, arguing that due to an efficient separation process in growing of the enzyme the final enzyme product does not contain any genetically modified microorganisms (GMMs).

(2) The company uses relatively few animals for laboratory testing and has an internal controlling body in place “Laboratory Animal Review Committee” that ensures that the protocol of conducting animal testing has been reviewed and approved. The goal is to continuously try to replace animal testing with other methods.

(3) Novozymes can demonstrate solid documentation that its enzymes have a positive influence on reduction of CO2 emissions because using enzymes saves energy compared with traditional processes. The company operates with a rough estimate based on life-cycle assessments (LCAs) that shows that the world saves 100 kg of CO2 emissions every time Novozymes’ customers use 1 kg of Novozymes enzymes. Thus, combined with own production figures Novozymes’ products reduced CO2 emissions by about 20 million tons in 2007. In comparison, according to the Kyoto Protocol obligations the CO2 reduction goal for Denmark is to reduce CO2 emissions by 13 million tons per year during 2008-2012.

(4) Novozymes sees the production and use of bioethanol as a major step towards meeting increasing needs with limited resources, if done the right way. The company is in dialogue with different stakeholders such as the EU and WBCSD in order to prepare a certification system for sustainable bioethanol. A lot of attention is currently being giving to engage in the political dialogue on the subject in the US in relation to President Barak Obama’s Green Policy agenda.

Social Issues

Within the social dimension Novozymes focuses on (1) human rights and labour standards, and (2) diversity and equal opportunities.

(1) Besides adherence to basic human rights principles Novozymes support the UN Universal Declaration on Human Rights and are signatory to the UN Global Compact. As views on societal

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problems and human rights practices vary widely from culture to culture, Novozymes has defined a set of minimum standards that define standards on freedom of association, non-discrimination, working hours, wages and benefits, child labor, disciplinary measures, and forced labor. To ensure compliance the minimum standards are reviewed once a year by local reporting responsibles at Novozymes’ global sites.

(2) The company operates with a formal Social Responsibility Management Standard to ensure commitment to non-discrimination. The diversity management project was implemented from 2005-2008 and has been anchored in Line of Business.

**Economic Issues**

The focal issue within the economic dimension is business integrity, which was implemented in 2005 with the purpose of stipulating and institutionalizing values, accountability and openness. The standard consists of six standards that are distributed to suppliers and customers. Responsible purchasing is managed, other than traditional audits, by a systematic approval and monitoring system of suppliers for mitigating risks.

**Recognitions for Being Socially Responsible**

Novozymes is included in several sustainability indices and has been rewarded for its engagement in sustainability. To name a few, the company was on the Ethisphere Institute’s world’s most ethical companies list in 2008. Novozymes was considered best in class by Storebrand Investments SRI, ranked as number 8 within the Pharmaceutical & Biotechnology sector in the Carbon Discosure Project 2007, and considered best in class for demonstrating good SRI practice by Kempen Capital Management in 2009. Furthermore, Novozymes is member of FTSE4Good Global and Europe indexes, was recognized by SustainableBusiness.com among the top 20 companies on their list of ‘World’s Top Sustainable Business Stocks.’ In 2009, the company qualified for a membership of the UN Global Compact leading companies, and got rewarded the Application Level A in the Global Reporting initiative’s assessment of transparency in sustainability reporting. In addition, Novozymes was ranked sector leader with the biotechnology sector from 2000-2007 in Dow Jones Sustainability Index, but was ranked number two in 2008. Currently, a comprehensive internal initiative strives to regain the position by scrutinizing and evaluating the company’s answers to the Dow Jones questionnaire. An important part of the process is to identify shortages in Novozymes’ sustainable business processes, which prompts new processes and projects going forward.396

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396 Mr. Mads Bodenhof, VP Finance, Novozymes
## Novozymes’ sustainability performance

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<td>Water Consumption, 1000 m³ Related to Goods Sold</td>
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<tr>
<td>Energy Consumption, 1000 GJ, Related to Goods Sold</td>
<td>%</td>
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<td>Absence</td>
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<td>2.3</td>
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</tbody>
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*Source: The Novozymes Report 2008*[^1]

[^1]: Novozymes A/S 2009
The Novozymes business case

A unique triple leverage on its biotech expertise

- **Innovation-driven top-line growth**
  New products, applications, markets, all expanding the use of industrial biotechnology with a green, sustainable potential

- **Productivity improvements**
  Systematic production optimization provides higher profitability and asset productivity; liberates capacity, delays investments, ensures high cash flow

- **Strategy to leverage expertise outside enzymes** - acquisition-based micro-organisms business and projects in biopolymers and biopharmaceuticals

...benefits the financials

- **Gives growth in sales and growth in earnings**
  17 years sales CAGR of 8%
  7 years EBIT CAGR of ~10%

- **Improves margins and reduces CAPEX**
  Year 2000: 16.7% Operating Margin
  Year 2008: 18.5% Operating Margin ... despite USD/DKK development
  Year 2000: ROIC 10.2%
  Year 2008: ROIC 19.5%

- **Adds additional growth opportunities outside enzymes and diversifies the business**
  BioBusiness

Source: Internal Novozymes Presentation
Appendix 14 – Porter’s Diamond

The competitive context of a company can be understood using the diamond framework, showing how the conditions at a company’s locations affect its ability to compete:

Source: Michael E. Porter (Porter, Kramer 2006)
Appendix 15 – Ratio Decomposition in the Financial Analysis of Sustainability

Source: Chousa and Castro (2006)²⁹⁹

²⁹⁹ (Chousa, Castro 2006)
Appendix 16 – Linking Sustainability Management and Shareholder Value

Source: Schaltegger (2006)\(^{100}\)

\(^{100}\) (Schaltegger 2006)
Appendix 17 – Investor Interview 1

May 27 2009

1. Can you briefly tell me how you make a valuation of Novozymes?

Well basically my valuation of Novozymes is a pretty standard DCF valuation simply to analyze cash flow based on our expectations to revenues in the various business areas. However, the structure to derive a target price is a blended 60% of DCF, 20% P/E multiples and 20% enterprise value over EBITDA. As such you get a proxy of how quickly, in case of a takeover, the company can pay for itself.

2. Are any of Novozymes ESG factors considered in this valuation?

No, none what so ever. It is a very straightforward financial based valuation, the DCF component to look at the cash flow and the others to look at a peer group and to bench against the market.

Why don’t you incorporate ESG factors into your valuation?

It is not the rule of the house here to incorporate these factors. I know there is a lot of focus in Denmark and Sweden and Norway on sustainability and CSR, but it is not something we bring into our valuation as such. And why do we not do that, it is just not a part of the way we operate here in our company. On the strategy side I can set the value of the stock at my discretion but it has to conform with the view of the house and if I start valuating in a way that is deviating from the rest of the house is doing it would cause consistency issues. And the house has to my knowledge not considered including ESG.

Peer group analysis: Being the market leader for industrial enzyme, 47-48% of the market, we apply a premium of 30% to the multiples. Agriculture and pharma companies are also used in the analysis.

Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?
No not at all. I could imagine using ESG as a secondary tool to back-up the financial analysis. I would never use it at a separate tool for analysis, maybe a part of the overall analysis.

4. How can Novozymes ESG factors possibly be included in a valuation?

I have no idea of how to get about it. Probably in terms of CG you can include certain environmental aspects as well. You have to identify parameters in order to make a valid comparison. You could add in CO2 emissions, environmental damage. I'm aware of the NZ case in US, they very elegantly avoided mentioning it. How would you measure the impact of such an accident, to objectively define the impact. For me to use it there has to be a define set of parameters, that are transparent and comparable.

Drivers: it's a philosophy question whether investment comes from a push or a pull. Companies should drive the development and set the standard. It has to be a business case for it. Talking to the companies I cover I hear nothing about environmental issues or CSR performance. GMO issues are more a question of risk.

5. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways?

We use entirely financial analysis, thus the single decision model. I think that dual is better than binary (running in parallel). Binary muturally exclusive. It's a huge challenge, but not impossible if the demand is there.

6. What ESG factors do you believe can give Novozymes superior value?

Obviously, NZ is using CSR as a strategic communication issue, and a marketing tool. Superior value for me can only be measured as shareholder value. NZ is seen as a safe bet. Low risk investment at the moment. Being the market leader, Steen Riisgaard is in the position to be preaching about sustainability issues.

Long-term horizon: tricky area, so political depending, oil price. There is a discrepancy there, NZ is building for the future and investing long-term, but the investors want value here and now, within a 12-18 months horizon. It depends on the profile of the investor. NZ can play to both camps, because they have both focuses.
April 23 2009

1. Can you briefly tell me how you make a valuation of Novozymes?

Ok. Just briefly to describe the model from which we work. It is a two-dimension model, where we first look at an assessment of the company based on six factors that we look at. The most important factor is the return on invested capital. We look at the management of the company, the cash flow generation and here there are some sub parameters but I will not get into that. The next parameter is the growth parameter, where we look at the company and where is it positioned in the marketplace, how many players are there in the market, what is the organic growth, what are the entry barriers to the area in which they operate. The second part of the model is the equity analysis of the stock where we look at different parameters again. Most important is the DCF analysis but we also look at the trading related and momentum related issues trying to find some flow in the market, looking at what are the dynamics. And it is very much correlated to the fact that we are very active investors. So we try to time the market both in up and down turns. And this is a general model that we also apply on Novozymes.

2. Are any of Novozymes ESG factors considered in this valuation?

No, not directly. There are some of the six factors that perhaps underline the evaluation of what we are doing but not directly as a parameter that we rank. There are a number of investors looking at ESG or sustainability for allocation of funds and in that respect this rating of Novozymes would come into consideration because here you look at a company being ranked best in class but not in the general model.

3. What are the pros and cons of doing a valuation this way?

I think there is a long-term global movement towards sustainability and you position yourself already today. And you can see there is a change of behavior both among investors but also among customers and clients. This is a trend that should make it pay off for companies that are trying to do this. But what we are trying to argue is that in a stock market, where we are trying to make money on a short-term period, this is not a relevant factor. But in fundamentally long-term investing this will come into account. So it is a long-term trend but not affecting daily stock pricing.

Can you give an example on how you integrate ESG factors in the evaluation of a company on a long-term perspective?

Again that will be very much related to one of the factors that we look at, for example barriers of entry to the industry in which they work. It takes a long time to implement ESG into the organization and into the way you do business, and even longer if you are a global conglomerate. If you take a look at the mutual fund xxx - our fund is also under the umbrella called xxx, but there are a couple of other SRI funds - they have been in business in 5 or 6 years but now they are closing because they couldn’t make money. So we have to focus on how can we make money now. And that is why we first look at the cash flow and all that stuff, and then of course you can look at the other stuff too. But it is not where we start. The SRI funds started to only invest in these clean, environmental companies and they failed.

What should the driver be in order for this picture to change?

First of all, historically sustainability focused companies have not outperformed the overall market, but going forward you can imagine that the change of behavior among investors and the public as
such would benefit these companies. Then secondly you need to have some legislation. If you put a price on pollution I believe some years into the future every company would probably be asked to do a CO2 accounting next to their financial accounting. Then it becomes very bottom line oriented and if you put a price on pollution, heavy polluting companies would be hurt in this process.

4. How are the ESG factors considered?

We do have an environment fund. And we have on purpose not made any restrictions on what we can invest in. It has to have some kind of environment overlay of course but the universe is still very narrow and we want the broad universe. ESG integration is still in the early stage and we will have exposure to those who are doing this but still it is a mix of both the traditional way of thinking and the climate focused way of thinking. Novozymes is a very obvious target for a fund given the way they are operating their company but also because of their index exposure. Novozymes has a good track record and we expect cash to flow into this industry in the future.

We are aware of what ESG factors do but again it is not included in our models. You could also say that Novozymes have almost a 50% market share within Enzymes. Barriers of entry are extremely high and they are able to generate a lot of cash. Moreover, they have the muscles to do a great job and a lot of other companies could not afford to do a similar job. Novozymes is in a valuable position and it is great because the work they do consolidates their position. But it is also a quite extra ordinary company with a high market share.

5. How can Novozymes ESG factors possibly be included in a valuation?

At this time there is so much money flowing in this direction and the pension fund members require that investment managers are looking at this. We think it is not so far out in the future but given the situation we are in just now, with a financial crisis, it is not what is driving share prices. But in the long run you can imagine that the underlining trend or movement towards sustainable companies will help them perform, thus we should consider taking this into our formulas. Taking Novozymes as an example, they have very high social and ethical standards. They behave well. So they will probably also be able to attract better-qualified people and this is also interesting to us as investors, that they attract the best skills and it creates a strong working environment. When we rank the companies in our analysis according to six different factors and we create a balance scorecard and rank each of these factors. The better score you get the better risk rating you will get in our rank. And again, in the long run, we live in a world where energy is a scarce resource, water is a scarce resource, you are seeing governments across the world that start to look at this. If we start putting a price on pollution then suddenly well-behaving companies will benefit from having optimized the way they produce. Then it is becoming a bottom line thing and it will improve their evaluation. I believe it is just a matter of time before this discussion will become material.

6. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways?

In the climate fund the first criteria we look at is how the company goes about various environmental issues, then we look at the financials. As such, it is a binary/dual process.
Appendix 19 – Investor Interview 3

April 23 2009

1. Can you briefly tell me how you make a valuation of Novozymes?

Yeah, so basically I’m using two sets of approaches, the first one would be DCF valuation, meaning that I do the estimates as best I can for what I think about future cash flows and on the back of that I do a DCF valuation. I also use Relative Valuation as a tool meaning that I compare, on the basis of my own estimates, whatever P/E Ratio I arrive at with whatever peers or comparative companies that I can find. So those are the two approaches that I use quite simply.

And why do you believe that these approaches are the best?

Why are they the best? I think in different market environments that the two sets of approaches can compliment each other meaning that in the kind of market that we are in right now for example, I think the DCF valuation has very little impact on how investors look at the stocks whereas Relative Valuation P/E might be more in focus and meanwhile in a sort of a more upbeat market overall, DCF valuation might actually be something that the investors just look at. So it sort of depends on the market environment, the usefulness of the two sets of approaches.

2. Are any of Novozymes ESG factors considered in this valuation?

They are not, certainly they are not the focus of this valuation you can say, I mean given that you could argue that DCF valuation would be dealing with, shall I call it hard factors but on the other hand, that is not entirely to either because especially in the case of Novozymes’ environmental factors are considered when you sort of make up your mind on what products you think it can pick off in the future and that is then sort of the leader for how you estimate the earnings of the company going forward.

Okay, so they are used more on the product-side. What about the way that the company acts and behaves?

Yeah, it is, should we call it negative screening rather than something that is directly included in the valuation of the company, meaning that we have a team of SRI analysts, you call them ESG, we call it SRI, but we have a team of SRI analysts, actually five analysts which are headed by xxx. In addition to this, we use the services of an agency that’s called GMI, which is, maybe you’ve heard of it, Governance Metrics International. And they supply us with quantitative data on corporate governance issues and I think, I mean, we are simply as a firm, we have simply begun the process of integrating what you call an ESG factors into our research, but overall I still think we have quite a long way to go before these issues are fully integrated. Even though we started the process and we have a dedicated team, it’s not fully integrated into the actual research.

5. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways? If yes, which way?

Interviewer: So it’s a binary process – first screening and thereafter the valuation? Is this the right order?

Not really, on all the companies GMI helps us to do the screening on the governance factors. But the screening is not decisive for the result I come up with in my research. In theory, even if the screening shows that there are a lot of unsatisfactory issues, I could still end up with a positive conclusion on the outlook for the stock. In my personal opinion, the ESG factors are certainly
relevant in a longer time perspective of app. 2-5 year. The ESG specialist and I do environmental and social factors.

What are the pros and cons of doing a valuation this way (using a binary/dual model)?

Pros: It’s a commonly used method. Meaning that it’s a methodology that most of my clients can agree upon. If I disclose my assumptions my clients can themselves decide whether the assumptions are reasonable or not.

Cons: DCF valuation is a methodology that is extremely sensitive to small changes in various assumptions, and you can have very different results. So by the end of the day you can have the result you wish.

4. How can Novozymes ESG factors possibly be included in a valuation?

Essentially we use GMI for the quantitative analysis of CG issues, so actually negative screening. If they come of with a lot of negative results then I will take them into account in my research. For instance NZ is in the Chemical industry. For each sector we have especially ESG issues that we look for, our SRI specialists have developed that. E.g. the REACH directive, here I look for whether the company is in compliance to these directives. We are asked to investigate whether the company handles risk for instance pollution issues. Then the question is to what extent, right? We have six questions for each industry. The investigation is done by the individual analyst, thereby making it subjective. But the questions are basically yes/no questions. The quarterly reported quantative data from NZ are not used. The data is right there; it’s not even abstract information. I have not really figured out what to do with the information, even though the information is right there. We started the process, we have our SRI team, but when it comes to me on a daily basis integrating the information into my research, I’m not quite there yet.

How can NZ make it easier for you to include ESG factors?

I think it’s up to us, it’s the analysts and the investors that need to change. I’m not going to do anything that my clients are not asking me to do. The service is not in demand. The analysts have started the process but it’s sort of the same things with investors. The investors have a whole team that does screening. It’s not the same people that do the ESG research and the financial research. It’s not the case that we don’t have the data, we do. When those people [investors] start to focus and demand on these issues, you can be sure that the rest of the sell-side analysts will start focusing on that side as well. It is very much dependent on time horizons. I think that what NZ is doing make sense. I just think that the sell side analysts have not come that far.

6. Which ESG factor gives NZ superior value?

Do you differ between companies being sustainable in producing products that are environmental or economic beneficial or in how they behave as a company?

Today, it’s not so much reporting on a quarterly basis on CO2 as it is addressing these issues when developing new products. It’s more on the product side and not how the company is driven. The potential of their products is more far reaching that the benefit of their own optimization of how the company is runned. I have not spent enough time on these issues to know how exactly to use these factors.

What do you need?

A kick in the butt from the client side. If the demand is there from the client I would certainly do it. It is simply still on an early stage.

According to you when will things start to happen?

I think that in recession times unfortunately, ESG issues are not top priorities. It requires dedication of staff and resources. Things will start moving again after the recession.
1. Can you briefly tell me how you make a valuation of Novozymes?

We use DCF analysis, peer group valuation of the most common key figures – P/E, EBIT to EBITDA - to get an overview of the different drivers of the company.

2. Are any of Novozymes ESG factors considered in this valuation?

Not directly but indirectly, definitely. We look for if securing the risk is low. For NZ, they make very detailed information on their environmental input and output. That gives us a good feeling about the risk. We do use and read different years. We also look at the more social side of it. We read it [ESG information], but it is harder to calculate than the financial key figures, but of course we have it in the back of our mind that they are doing a good job. It is not used as systematic as financial key figures. It might point to some deeper analysis if these [environmental] figures were deteriorating.

3. If yes, how are the ESG factors considered?

Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?

It is nice that NZ is in the DJSI, but it is not like I expect that the share price is going to go up 10% because they are in the index but it gives me a good feeling because I know that the index is based on a very thorough analysis. So it is good. For me it is bringing down the risk because it feels safe because they have their hands on the different things in the company.

Is the service of including ESG factors bought from an outside service provider/screening agency?

We have just made a broad deal with a service provider called GES. They actually screen our whole portfolio. We buy what have been screened. At the moment, we only exclude companies that make cluster bombs. What GES do for us, they make sure we catch every incident. Then GES will tell us if there is a problem. For the Danish companies we will catch it, it is more difficult for international companies.

GES then starts the dialogue with the company. It might end up with us voting at their general meeting. For me, the first step will be to make us aware. We will call the company ourselves if it is a Danish company.

Most of our customers are pension funds, so they do the voting. We could do it for our mutual fund, but it has never been necessary.

What services are bought? (Negative screening, positive screening, divesting, stakeholder engagement)

We have some client that specifies some negative screening. We do not use positive screening.

How is this valuable to your valuation?

We do it [consider EGS factors] because clients want to make sure the companies we invest in are not violating any Danish or international laws or regulations.

We started a fund five years ago, were we selected the best in class companies. But it was never a success, but that was also five years ago. With all the debate, I think in three to five years it will get
more and more important to make sure the companies you invest in have a dedicated attitude towards these (ESG) factors. But the investor, basically they are more into a good return. We tried to sell the fund to pension funds. But we never had the required success to continue. The depressing thing was that these positive screenings did bad compare to the market. I guess you have to see these things in the long term to see there is excessive return compared to the general market. I still think the idea is good (to make a positive screening).

4. How can Novozymes ESG factors possibly be included in a valuation?

The obvious thing to do is to influence the WACC. The beta might be lower. A company like NZ that include a lot off attention to ESG factors ought to have a lower WACC.
I would recommend a buy of NZ shares– there is huge potential in bioethanol. We have a huge chunk of NZ shares.

Communication:
We have benchmarks we have to follow, and if we buy a large proportion of a stock we have overweight. Hopefully that will do better than the market. We have seven or eight companies, which are overweight in a broad portfolio and NZ is definitely one of them. That is one way of showing that you believe in the company.
Then we have meetings with our customers and they can ask why we do what we do and we explain that the traditional figures might say something different than the growth story.

Do you differ between companies being sustainable in producing products that are environmental or economic beneficial or in how they behave as a company?

That is focusing on the products the company is producing. Not the way the company behaves. But that [good behaviour] is nice – that lowers the risk.
ESG is a parameter like other parameters. We have this holistic way of looking at things. I think it is important not to only look at the key figures but to get an overall picture.

5. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways? If yes, which way?

A model where we separate the two things is used. We do first take into account that the company is doing a good job on the ESG, but then afterwards when we read the annual report we take into account what results and efforts they have made on the ESG factors. We do it separately. The ESG factors they kind of give you a good feeling about the DNA of the company.

6. What ESG factors do you believe can give Novozymes superior value?

Compared to others NZ is doing it in a pretty good way. The more figures you get the better - we do not need ten pages where they speak about details about what they do. It is better for us to have figures because we are used to looking at figures. And they are doing it already.
If everybody did it in the same way it would be easier for us to compare and integrate into our analysis. And easier for us to get an understanding of what is going on.

I do not have any ideas on what they can do differently. They know that better than I do. I think they are doing a pretty good job.

Appendix 21 – Investor Interview 5
May 1 2009  (Translated from Danish to English)

1. Can you briefly tell me how you make a valuation of Novozymes?

Our company is long-term oriented with long-term investment strategies, which means that we don’t look at the company within the next 3 to 6 months, but we look at the outlook and the opportunities for the company in a 5 years horizon.

Besides a DCF model, peer groups analysis and the price to book and price to sales (historic data), we look at various aspects of the company. Is the company market leader? What is the company’s market position in terms of products, patents, barriers to entry etc. In addition, we look at the company’s balance, is it a sound and solid company and the financing of the company. Then we evaluate the management performance, do they have a good track record, do they keep their promises and are they transparent. Is the structure of the company’s financial accounts transparent and is the company willing to have an on-going dialog.

Our company also invest in foreign companies. The Japanese companies for instance are very bad at giving feedback to investors. Novozymes on the contrary is very open and transparent.

2. Are any of Novozymes ESG factors considered in this valuation?

No, but long-term drivers are taken into consideration to a high degree. You can put a higher premium on companies that do really good in terms of the more soft elements, however, that would be based on gut feelings.

Investors are aware that Novozymes is doing good, they have a good track record that you are willing to pay extra for in form of premium.

3. If yes, how are the ESG factors considered?

Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?

No

Is the service of including ESG factors bought from an outside service provider/screening agency?

Yes, we use GES Investment Services. We have also signed the UNPRI.

What services are bought? (Negative screening, positive screening, divesting, stakeholder engagement)

I don’t know, but we use GES’ database as a source for monitoring, we receive alert e-mails when their monitoring system has found something on one of our investment companies. We have also made use of shareholder activism in some cases, but only a few.

How is this valuable to your valuation?

Depends on the situation at hand, we take the information provided by GES into account. Last year, we excluded a company (the Burma case).

4. How can Novozymes ESG factors possibly be included in a valuation? What does this require?
It requires comparable data and comparable companies.

5. We have identified at least two ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways?

A dual decision process.

6. What ESG factors do you believe can give Novozymes superior value?

It lies in the back of my mind that the company is doing a good job and is behaving well. Novozymes have promising future prospects that are taking into consideration indirectly in my valuation.

Do you have a solution to how ESG factors can be taking into consideration in a DCF model?

Do you differ between companies being sustainable in producing products that are environmental or economic beneficial or in how they behave as a company?

It is the totality you valuate; in the case of Novozymes you also pay a high price because the company offers an attractive totality. It is linked to many things; both that they have good products in their pipeline as well as a completed focus on the more soft aspects. They succeed in embracing opportunities and use them to create superior company value.

Our company is communicating the social profile we have to our customers. We say that we have an on-going attention towards strengthen the use of ESG in terms of constant monitoring; this means that we can reach a broader clientele. LD Invest also have a social dimension – as such it is also a branding tool for us and hopefully it will evolve into a competitive resource. Demand from our customers right now after these new elements is not that strong, but I think it is going to change in the future.
Appendix 22 – Investor Interview 6

June 12 2009

1. Can you briefly tell me how you make a valuation of Novozymes?

We use common valuation. DCF, PE, peers group, EBITDA models.

2. Are any of Novozymes ESG factors considered in this valuation?

Not directly, only if they have a negative effect on earnings. We have a negative list of companies we cannot invest in, but we do not have a positive list. Basically we do not put figures on the ESG – hence no value is on them. We usually just exclude the companies.

3. If yes, how are the ESG factors considered?

Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?

No

Is the service of including ESG factors bought from an outside service provider/screening agency?

Yes, from GES.

What services are bought? (Negative screening, positive screening, divesting, stakeholder engagement)

Negative screening.

How is this valuable to your valuation?

We use GES to make a global list (negative). We look into all companies on their excluded list and decide if we want to invest in them. And then we make a list we do not invest in and then a list of companies with we engage with. So we use negative screening and stakeholder engagement. We ask the companies questions but we do not have a checklist.

Long-term opportunities:
You can say if you have extremely environmentally friendly companies it will tend to get value and obtain credibility. I also guess NZ is doing it to make money on it. NZ have a great track record.

Time horizon:
Valuation period: Looking 5 years ahead and then a rough estimate for the next five years. For NZ you would make a longer estimate, as they are in new growing industries - you could make the valuation period 15-20 years instead.
Holding period: we are most long-term, but tactically if you realize value within 8 months you can sell some of it there. But strategically we keep stocks 2-3 years.

4. How can Novozymes ESG factors possibly be included in a valuation?
In five or ten years there will be more sophisticated ways of looking into this. Right now it is hard to make it an isolated part of the valuation. We are not saying ‘this is the market value and then you add on the ESG value’. I do not see how we can do it [integrate ESG factors] in the short term but that does not mean it does not have a value. I think it has a value. It is so much in focus, I am sure there will be developed some models and we will look at those models and see if they makes sense and add more to the valuation than we have today. Today we have more non-qualitative. We use various reports, talk to the companies, talk to the competitors, their advisors.

5. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways? If yes, which way?

It is very simplified to say it this way. We use financial which shows the financial impact, but of course all the ESG soft factors can be included in some kind of risk that makes it unattractive to invest in a company. But we do not price each ESG risk. So we tend to be very financially focused. I do not think it is binary/dual basically.

6. What ESG factors do you believe can give Novozymes superior value?

We can count efficiency and the products they deliver - that we can put a value on. We can convert good sustainability behaviour into efficiency and we can convert efficiency into margins and we can convert margins into earnings and we can convert earnings into better performance.

They are highly valued. They need to keep momentum. Keep on growing. They are in a unique position. They must give us as much visibility into all these things as possible. Maybe they can give us more than we already have. To make us understand the company.
Appendix 23 – Investor Interview 7

June 12 2009 (Translated from Danish to English)

1. Can you briefly tell me how you make a valuation of Novozymes?

You will fail if you strive to develop a look-alike DCF model that contains a separate ESG component. You can split ESG factors into many layers that affect the company value differently. By only looking at ESG factors there is a tendency that CG falls into the category of social and environmental issues.

In the case of NZ there are elements that can be characterized as core SRI meaning that the company complies with basic law and regulation. Then there is the climate change topic. When the company addresses these ESG factors and it becomes a part of the company’s business model, top-line growth, it is interesting to investors.

It’s important that you look at the issues from a general point of view. You cannot find a connection between adherence to human rights and the company’s valuation, but you can make something close to a connection if you look at the governance structure overall. Then it becomes a risk factor. The argument for excluding companies is when the risk becomes too high. A high-risk premium is ascribed to companies that have issues with its ESG factors. In our company we do not ascribe a similar lower risk premium to companies that are doing a good job at addressing ESG factors. It’s important to look at what part of the probability distribution that is likely to be affected if the company has an accident.

(The interviewee draws the curve: Risk premium on the y-axis and focus on CSR on the x-axis).

(The above figure is developed by the interviewee to explain his view on the development of CSR in an investor perspective. In general, when companies start to address CSR issues, the risk premium is not lowered much as they are expected to address certain rather basic issues. Then, there will be a significant decrease in the risk premium as the company is addressing CSR issues proactively. Nonetheless, improving CSR issues infinitely will not lower the risk premium significantly.

Ten years ago there was less to win in engaging in CSR, as CSR issues were generally not the focus of attention for either companies or investors. Currently the attention to CSR is increasing illustrated by a steeper curve. The interviewee expects the trend of addressing CSR to increase,
which means the curve further changes, so that companies not addressing CSR issues will be
given a higher risk premium, as the general demand to companies to act socially responsible
increases. On the other hand, there will be significantly lower risk premiums to be obtained if
companies seek to address CSR issues proactively.

Where Novozymes is currently situated, means that there is a greater chance of getting a higher
risk premium if the CSR focus is weakened, than there is to further lower the risk premium. At least
it takes a lot of effort to move further up the curve.)

The big risk factor occurs on a lower level (in the 'bad' end), the marginal effect in the 'good' end is
hard to concretize. The marginal benefit of the last invested entity is hard to point out. I doubt that
the differentiation will be larger in the 'good' end. If you look 10 years back in time, the curve will
look quite different. First of all, the curve is not measurable and cannot be demonstrated. Long-
term return is hard to document, it is pure perception. But the curve indicates that focus on ESG
over the last 10 years has increased drastically, which plays a role in the investors’ consciousness.
If we look 10 years into the future I’m sure that a development will happen. Our company can feel
the development in the way we work.

The fact that Novozymes ensures their front position the company makes sure that the
development does not overrun them. One of the areas where we see a direct link between ESG
and business risk is in terms of the climate debate. In this case you can take a valuation model and
put a price on an ESG input. There will always be things that cannot be factored in directly. The
indirect manner whereupon ESG factors are included will never be in terms of a direct value.

2. Are any of Novozymes ESG factors considered in this valuation?

Our guidelines are systematic. Our working methods consist of screening made of EIRIS. Our two
SRI specialists evaluate the cases that occur. We have signed UNPRI and is involved in different
networks for instance Dansif. Herein lies the systematic methodology. Our working methods will
continually change according to the development of the curve, and will eventually become more
sophisticated.

Before 2005 we had a set-up where the individual asset manager was responsible for each
company and also had ESG responsibility. The set-up is more or less the same today, but the way
we handle ESG factors is different. Now there is more focus on systematically addressing ESG
factors. In 2005 we started using EIRIS for screening of stocks and we established a committee for
social responsibility consisting of our CEO, CIO, myself and a few others. It was done in stead of
having the individual portfolio manager evaluating the ESG part. Handling these issues requires
specific competencies other than financial competencies, and it is utopia to believe that all our 20
employees are up to date within this field. Hence, it was gathered in a smaller group of people. The
formalisation of the decision structure was rooted in the committee for social responsibility, which
in reality has the decision power to exclude firms.

In the end of 2007, which initiated the next step of the development, it was decided to focus on
ESG in the board meetings throughout 2008 (annual theme). Here we decided that our ESG
guidelines are still valid, and the only things changed are an upgrade of how we work with ESG,
and increased informing and openness about decisions. There has been a gradual change from
excluding towards a larger degree of focus on engagement. This is due to the belief that excluding
the stock will not change the world. So if you want an impact as an investor, engagement is the
way forward. If there is a large amount of stock where the belief in making a difference is little there
may be reason to sell.

The last part of the development was to make an SRI secretary with two full time employees. I the
Danish stock portfolio the SRI monitoring is integrated, but on the foreign stocks we still partly buy
the services form an outside provider.
Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?

Does a good ranking give value? We have not made use of DJSI. We only use negative screening. Maybe it would be possible to utilize rankings and indices in the future but it will require a huge shift in attitude.

Is the service of including ESG factors bought from an outside service provider/screening agency?

Yes, we use EIRIS.

What services are bought? (Negative screening, positive screening, divesting, stakeholder engagement)

Negative screening and stakeholder engagement on foreign stocks. In terms of the Danish stocks we are in such a close dialog with the companies that we do not need external assistance.

How is this valuable to your valuation?

We do not use positive screening. On the foreign stocks such as mining companies or oil companies we use EIRIS’ expertise to make case based analysis. We really benefited from these analyses because they made us capable of arguing in favour of our investment decisions, providing us with facts.

4. How can Novozymes ESG factors possibly be included in a valuation?

What can the company improve? 99% of the communication is purely on financials, 1% is ESG communication.

Novozymes and Novo Nordisk have been indecisive to choose what reporting model to go for; an integrated reporting method or a separate method where the financials and the CSR related information are separated. Some solutions have been better than others. According to me an integrated reporting method is the best. There are many companies that use integrated reporting without knowing whether their approach has an integrated goal.

Looking at Novozymes it seems truly dedicated and integrated in the company culture. We see examples on companies that report on their CSR output in form of appendices. That is not integration according to me.

To get more focus on integration on the investors’ side will be a gradual development. Novozymes will not get more additional value from doing more in this area, because they are already high on the curve. But many companies could learn a lot from Novozymes. CSR is deeply integrated into the company; Novozymes has succeeded in this area.

Do you differ between companies being sustainable in producing products that are environmental or economic beneficial or in how they behave as a company?

Well, what are the most important drivers? On the product side, addressing the environmental issues is bioethanol one of the key arguments for pricing the company. That story they cannot tell any better than they do now, which is also reflected in their current stock price. The other side [operations side] is also a part of setting he price. Novozymes has a high degree of credibility in creating results, they deliver results. There is a huge difference in the price you get for a company that has a stable growth curve and one that jumps up and down. Novozymes has been good at selling their own story. Basically Novozymes has a price that for many is incomprehensible. The price reflects top managements ability to tell the story. What we are looking for at Novozymes are
risk factors that indicate that they cannot maintain the current price. They have to keep on telling the story about growth opportunities e.g. dreams, spectra of options, bioethanol 2nd generation etc. This will be achieved by working more with sustainability on the products part.

If the operational part deteriorates it is impossible to save the fall in the stock price. Maybe the fall will be slightly softer. If the company goes bankrupt with the world’s best CSR strategy, it still goes bankrupt.

It is important to determine when you want the stock to perform and the factors you look at. But sure performance is crucial. The horizon value in the valuation of Novozymes stretches far into the future, more than ten years. In a DCF model, Novozymes has a very long tail. There is a very big difference in the time horizon depending on the stocks we are looking at. Cyclical stocks have shorter time horizons.

5. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways?

In the Danish portfolio it is integrated, meaning that it is the same person who is responsible for both the SRI and the financial part. In the foreign portfolio the process is separated as we make use of negative screening.

On a daily basis we work with gut feelings for instance Novo Nordisk’ recent verdict. The case has been dealt with in a professional manner. If the crime is made several times it will lead to exclusion from our portfolio. We look at if the company has the procedures and systems in place and if the company reflects on the happening.

6. What ESG factors do you believe can give Novozymes superior value?
Appendix 24 – Investor Interview 8

June 5 2009

1. Can you briefly tell me how you make a valuation of Novozymes?

The big differentiating point about NZ is its scope to growth without consuming capital. At a time when the Danish ddk is depreciated against the dollar, they have grown at profits 12 p.a., margins have increased, earnings per share have grown 14.5 percent p.a. reflecting an OTC tax rate and the fact that they brought back shares. Cash employed only grew with 1 percent p.a., which is partly due to acquisitions. Effectively, they have grown without using capital. DCF is used.

1. Are any of Novozymes ESG factors considered in this valuation?

We look at what the management have done, have they achieved their goals and such. NZ is increasingly finding ways of incorporating achieved goals into its selling propositions. NZ uses a very direct way of including their environmental factors into its sales model. Any simplistic factor is not included in my valuation.

We have a Corporate Governance (CG) team, that review company policies, look into if the business is well-managed. However, this is not included directly in a separate investment decision. At Baillie Gifford we look at holdings for long-term investors. We try to act as owners for businesses. Holding the shares as long as possible. We look at four categories; Industry background, Competitive position, Management and Financial position. The assumptions are thus subjective.

The CG team assists with the management performance e.g. on NZ; the debate on GMO, has stayed out of the mainstream press. It is no accident that that has happened. NZ has been in contact with NGOs etc. Being proactive about addressing this concern, not getting effected by panic from people uninformed about its products. The ESG factors is an example of good mgt practice. I don’t put an number of that and put it into a DCF model, but it’s a factor that I think about.

Interviewer: What are the pros and cons of doing a valuation this way?

All valuation is subjective. I would focus on trying to understand the management issues.

Pros: in a long-term approach you get to understand the business that you invest in. Try to be able to differentiate of what is important in the long-run and what is noise in the short-run.

Cons: it’s the big factors. The growth rate of the business. If you are wrong about the fundamental part, then you are out of business. We operate with a long-term period of average 3-5 years. Our ideal investment period is to hold it indefinitely.

3. If yes, how are the ESG factors considered?

Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?

No – only in-house research.

Is the service of including ESG factors bought from an outside service provider/screening agency?
No. Our clients are generally institutional pension funds. They would specify if they have restrictions they want us to follow. E.g. tobacco, alcohol, defense. We would take on clients of ethical restrictions but it’s handled internally.

5. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways?

It would be the single decision criteria. We are not only using financial data but we still look on soft factors as explained earlier (Industry background, Competitive position, Management and Financial position). I would therefore be careful about using that distinction.

Our primary goal as investors is to maximize the ROI. It is not about making moral decisions. The issue has something to do with the relevance of how profitable a company will be.

**Do you differ between companies being sustainable in producing products that are environmental or economic beneficial or in how they behave as a company?**

We are interested in the growth opportunities potential on sales and profits in a 10-15 year horizon. Being able to taking a stance in the debate about the world’s fundamental changes will be important for the company’s profitability in the long-term. These companies are generally sound financially. They will grow their profits faster by identifying opportunities, and will only succeed financially by focusing on financial criteria. Credibility is important as well, to attract the best and skilled people and to engage with various stakeholders. As such, ESG can not be translated directly, but they are important.

We look at the attitude of the company to on-going issues. NZ has engaged with NGOs. ESG factors influence the opportunity for future growth.

6. **What ESG factors do you believe can give Novozymes superior value?**

Bioethanol is an opportunity for future growth, not an ESG factor in itself. NZ has an ability to be an early thinker, using opportunities as a selling point, thereby creating competitiveness. NZ is a great example of a company who’s opportunities are determined by environmental factors. NZ is able to have a positive environmental impact on its value of opportunities, that give them an opportunity to growth – not driven by ESG factor themselves.
Appendix 25 – Investor Interview 9

May 28 2009

1. Can you briefly tell me how you make a valuation of Novozymes?

We have a three-stage DCF model. It is not a DCF model but something like it focused on return on capital employed.
It has an explicit modelling period of 5 years. The art of modelling is mostly to figure out how the first four years are going to look like. In the fifth year it has a normalised view.
Then a 6-15 year competitive advantage period follows. Here we are making a call on how much we think that capital is going to fade, just by the fact that competition eventually comes in. In addition we have to make an assumption about how much the capital grows. So the value of the company is the amount of capital it has and the return on their capital. We are making two assumptions about how capital grows and where the return goes.
From year 16 to year 40 to pick a number, we assume everything fades to its cost of capital (say e.g. 8% and returns are 60% on employed capital) – amount of capital and return on capital.
It is the first and the second periods the ESG factors have the most influence as in the third period everything goes to its cost of capital. You could say that the company would not exist in the third period if it does not consider ESG factors.
The sum of those three parts, the value of the returns from year 1-5 and year 6-15 and 16-40, the sum of those is what we think the fair value is today.

2. Are any of Novozymes ESG factors considered in this valuation?

It is very hard to value sustainability factors. ESG factors are necessarily integrated into each of these modelling periods, but to say that you can split them out is not possible. They are really integrated in. Let me tell you how we think about sustainability. Starting with the point of the valuation model, what you quickly learn is that for most companies, most of the value comes from the long term. So it does not matter what happens this quarter or this year or even really the next couple of years, it matters whether this is going to be a going concern in the future. If you really care about the long term and if you believe the company is going to be around for the long term, you have to believe that sustainability matters. Because sustainability factors are the factors that rear their head in the long-term. Sustainability has to be integrated into their business, and the business has to have a view of how its key sustainability factors affect it. Or else it is not going to be around in the long term. In the case of Novozymes, they are clearly one of the best companies in the world in terms of integrating sustainability into how it runs its business. And it does that in two ways: 1) of identifying positive sustainability drivers of its revenues and earnings, hence actively seeking opportunities for their enzymes to address climate change to make a whole bunch of processes more energy efficient, less water consuming etc. Their enzymes help the world in many, many different ways. That is all the positive stuff. And 2) how to avoid negative sustainability drivers that would affects it revenue and earnings. Hence on the down side, the negative side, they are equally vigilant about ensuring that when they make their enzymes they do it in a way that is not as energy intensive – they are conscious about their environmental impact. And similarly they think about if their customers are sustainable. They think about it long and hard.

How do we integrate it into our model? That is the hard part. The honest answer is, it is implicit in all of our forecasts. And we cannot make it explicit; we do not have a feature to make it explicit.
When we think about a company and sustainability, we think about what is material in that sector (e.g. Novozymes opening a school in Iowa is not material to their business. That is not integrating sustainability as far as we are concerned). We do not do either positive or negative screening and we think those tools tend to mislead you and do not necessarily bring up the best companies. We look at what matters in each sector and what is material sustainability drivers. What is a material
sustainability driver in the enzymes industry is totally different from what are material drivers in the pharmaceutical industry. So what gets us excited about Novo Nordisk is actually quite different from what gets us excited about Novozymes.

Do you differ between companies being sustainable in producing products that are environmental or economic beneficial or in how they behave as a company?

Both sustainability related to the products and sustainability related to the behaviour is important. There is a third element of sustainability: sustainability of business for the business sake. Quite apart from the ESG factors per se. (e.g. for Novozymes they have recurring revenue streams as P&G regularly want to buy their enzymes. That is a really good attribute of their business) All three are equally important. Pursuing the positive, avoiding the negative and being a strong business. Some of the companies we follow do not have all three. One may have strong business, but do no harm, so avoiding the negative. But the ones we are most excited about have all three.

The ESG factors are not explicit in our valuation, but it is integrated systematically. But I cannot tell you how much of a gross margin comes form ESG factors. But it is in there. Some things are harder to quantify, especially on the social side. E.g. how do you factor in Novozymes lower turnover because they treat their people better? It is really hard. They are happier and thus may be related to productivity. This is especially important in the R&D department.

3. If yes, how are the ESG factors considered?

Do you use ratings or indexes such as the Dow Jones Sustainability Index or FTSE4Good or equivalents when selecting stocks?

Not really using them.

Is the service of including ESG factors bought from an outside service provider/screening agency?

There is one service on the corporate governance side, which is ISS [institutional shareholder services]. It is helpful, but not the most important.

4. How can Novozymes ESG factors possibly be included in a valuation?

[Look above]

5. We have identified a least to ways of making investment decisions: Using a single decision criteria based only on financial data; and a binary/dual decision model using financial data and ESG factors when choosing stocks. Can your investment decision-making be described in one of these ways? If yes, which way?

I guess we sort of are more in the second category. Maybe we are tertiary. We have the positive and the negative which sort of falls into the ESG category and then we have the ‘how good a business is this?’

Talking about governance, we look at the structure of the board, the shareholding group. The Foundation is holding the majority of the shares and normally that would not be a great thing. But in the case on Novozymes and Novo Nordisk it is good as it prevents them from being frivolously taken over and allows them actually to grow their business well. We think that the Foundation is on the side of minority shareholders.

Could the decision-making model be described as a hybrid model where financial data and ESG data are considered equally?
Yes I guess that would be fair.

6. **What ESG factors do you believe can give Novozymes superior value?**

A whole bunch. Most of it we have already talked about. On the positive side their ability to produce enzymes that dramatically reduce green house gas emissions etc. Their enzymes are more efficient than their chemical based alternatives, which is important. On the negative side they do a great job on ensuring that their own manufacturing footprint is streamlined. Avoiding the negative, they do a fabulous job of maintaining their labour force and they are very thoughtful on the governance side as well.

**So keep on doing what they are already doing?**

Yes.