

CSR and Mainstream Investing – a New Match?
***An analysis of the existing ESG integration methods in theory and practice
and the way forward***

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Abstract

Companies and investors perceive the value of Corporate Social Responsibility (CSR) differently; companies strive to obtain a competitive advantage and long-term value by working strategically with CSR, whereas investors see major barriers of integrating Environmental, Social and Governance (ESG) factors into financial valuation models. Investors’ current methods of applying ESG data in a financial valuation are categorized as either: a ‘single decision model’ where only financial data is valued or a ‘dual decision model’ where both financial data and ESG factors are considered sequentially. As some Socially Responsible Investment (SRI) funds are able to outperform the market we argue that the current available ESG information is not being used by the majority of the investors, and that the two models identified are insufficient to capture the additional value. Based on previous attempts to theoretically link CSR and economic performance, we propose that a new ‘integrated decision model’ should integrate financial data and ESG factors, but it should not be based on existing valuation methods. Moreover, it should pursue a single objective, namely that of value maximization. From a case study on the Danish company Novozymes it is found that in practice, each identified group of the interviewed investors, value ESG data differently. One sophisticated investor group implicitly integrates ESG factors into a very long-term focused valuation, in which considerable value is attributed to ESG factors.

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. Can a new way of thinking solve the two problems? We see how society poses 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. 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. Sometimes the greatest facilitator of change is a crisis (de Geus 2002). Since the world currently finds itself in a crisis, this may be the time to change.

The research at hand takes a closer look at the current debate both on how companies are running their businesses in a responsible manner, and how investors should rethink the fundamentals of company valuation. Many argue that this 'rethinking' should be done by systematically including environmental, social and governance (ESG) factors when evaluating companies' overall performance (WBCSD 2009b). This debate about rethinking valuation indicates that companies and investors value social responsibility differently. Our overall puzzlement in this research has been *why* this is the case? This wonder was immediately captured in an underlying assumption which served as a foundation to investigate why companies that work proactively and strategically with Corporate Social Responsibility (CSR), are not given a superior value by investors.

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 (WBCSD 2009b). The problem at hand boils down to why companies struggle with getting their CSR message across to investors and analysts and, oppositely, why investors 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. The research question investigated addresses all three aspects: *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?*

Literature review

SRI is seen as best practice (Cowton 1999, Cowton & Sparkes 2004) and currently the most comprehensive way for investors to consider CSR information in their investment decision (Bengtsson 2008). However, many authors have strong arguments against SRI funds saying they do not perform either better or worse than other funds (Vogel 2005, Bello 2005). On the other hand several authors seek to prove that social responsibility has a positive influence on the economic performance (Derwall et al. 2005, Semenova & Hassel 2008, Orlitzky, Schmidt & Rynes 2003)

A few attempts have been made to incorporate CSR into existing financial models. For instance Chousa & Castro (2006) suggest an integrated framework for the financial analysis of sustainability and Schaltegger & Figge (1997) and Schaltegger (2006) include the environmental aspect to the concept of shareholder value as described by Rappaport (1986). But what is really needed is *theory* explaining the relationship between social responsibility and companies' economic performance. Ullmann (1985) concluded that the inconsistencies in previous research were due to lack of theory within this field of research, and even though the debate has evolved since the mid-80s there has not been a convergence of knowledge (Lankoski 2008). The closest proposal to a theoretical framework to this date has been set forward by Schaltegger (1988), 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. 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.

Methods

The research is divided into three parts. Firstly, we seek to investigate if our assumption, that *'CSR is valued differently by companies and investors'* can be confirmed empirically based on existing data and newly achieved input from expert interviews. A 'map' of the complex landscape of initiatives and actors of social responsibility is provided to understand a highly complex area of study, and then the business case for CSR as seen from the companies' and investors' perspective respectively will be identified. This will allow us to identify the underlying problem. Secondly, a theoretical analysis is conducted to identify how investors make investment decisions by deriving two different investment decision models. An argument will be set forward that a new integrated valuation model is needed which incorporates CSR to a greater extent. Subsequently, a discussion follows on whether CSR should be adapted and incorporated into existing financial models or if the financial models should be reconsidered, by taking contemporary research into consideration. Lastly, a case study of how investors in the Danish biotech company Novozymes perceive the CSR-related value is used to test the theoretical findings of the identified investment decision models in practice.

For the empirical analysis, 5 experts¹ within the field of CSR and economic performance have been interviewed in order to explore and support our findings from secondary data. For the company specific analysis, 7 investors and 2 analysts² of both Danish and international origin have been interviewed, reflecting the geographical distribution of shareholders in Novozymes. The interviewees are familiar with the case company and have been selected according to their different investment objectives as well as time horizons; sell-side analysts operating with a short time horizon, buy-side analysts and institutional investors operating with a medium to long time horizon, thereby representing the general perception of CSR in the investor community. The interview form has been face-to-face in 4 of the cases, whereas the rest have been conducted by phone.

Empirical analysis

Entering the field of CSR and SRI it quickly becomes obvious that the drivers 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.

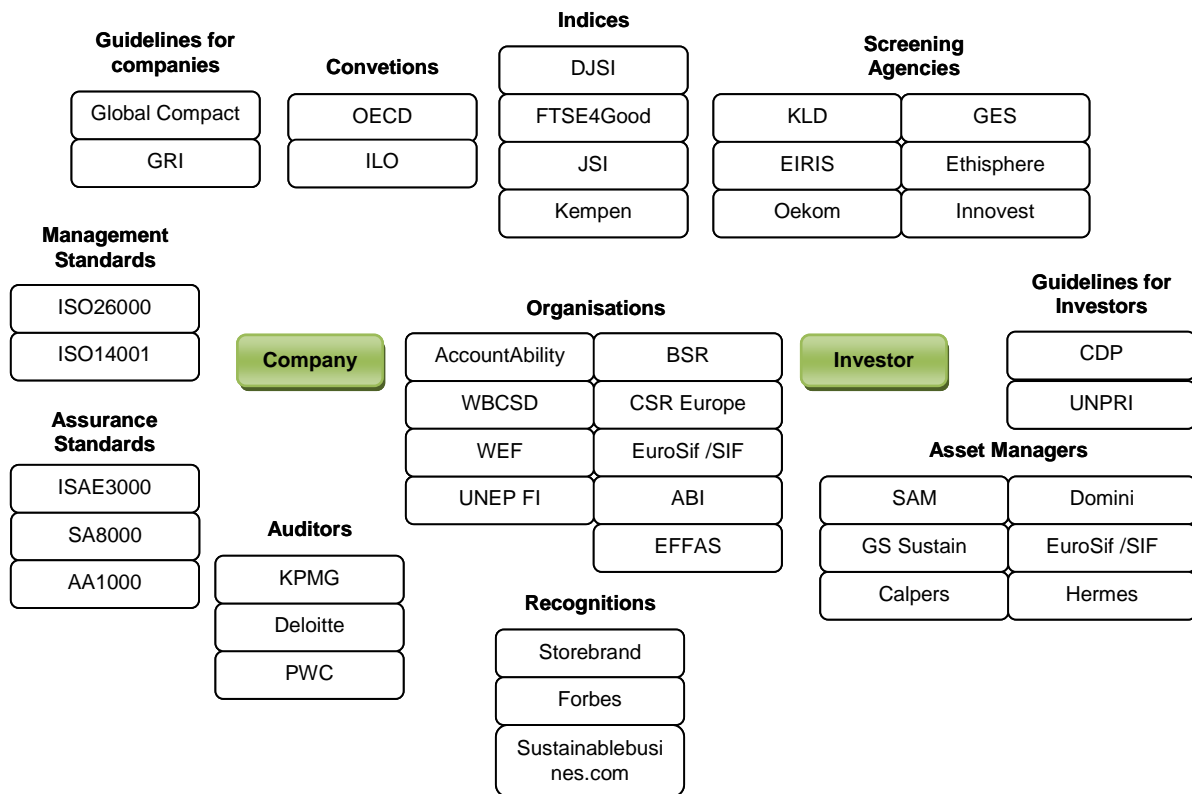


Figure 1: Mapping of drivers of social responsibility in relation to companies and investors. The different agents are divided into clusters according to purpose. Source: Own model.³

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 UN Global Compact and Global Reporting Initiative (GRI) as well UN Principle for Responsible Investment (UNPRI), but also organizations like the World Business Council for Sustainable Development (WBCSD), UN 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 (Eurosif 2008).

CSR from a company perspective

CSR information and data presented in financial reporting forms are valuable indicators to analysts and investors of a company's current value and future potential. According to KPMG, a recent global survey shows that about 80% of the 250 largest companies worldwide have published reports including such information, compared to 50% in 2005 (KPMG 2008). Reporting is just one component of having a

comprehensive approach to CSR, which includes other essential elements such as defining strategy, developing and implementing policies and procedures, and evaluating performance. According to KPMG's survey, the number of companies with a publicly available CSR strategy is low albeit increasing (KPMG 2008). With corporate responsibility strategies in place companies should optimally be able to quantify their strategic commitments, at least roughly (WBCSD 2009b). Nonetheless only three-quarters of the world's 250 largest companies have a corporate responsibility strategy that includes defined objectives.

According to investors, CSR performance should be communicated in a systematic and transparent way. However, companies that strive to communicate their CSR performance in an integrated manner on par with financial data face some common major barriers: companies report differently on CSR, and furthermore 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 (WBCSD 2009b). However, the increasing trends of the world's largest companies engaging in CSR reporting practices clearly demonstrates that companies are very much aware of the value generated (KPMG 2008).

CSR from a company point of view can impact business performance. 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, which can be linked to financial performance on the one hand, and shareholder value on the other hand (Mirvis 2009). 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 (Mirvis 2009). 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.

Investors' perspective on social responsibility

Investors can be divided into three categories as shown beneath in figure 2. The first category contains '*Mainstream financial investors*' who use financial data exclusively 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 named '*Mainstream SRI investors*' as the methods used is rather simple (Eurosif 2008). 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:

None	Some	Significant
Mainstream Financial Investors	Mainstream SRI Investors	Core SRI Investors

Figure 2: Categorization of three groups of investors according to a continuum of ESG data considerations in investment decisions. Source: Own model.

Today it is increasingly recognized that the concept of SRI 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 (Bengtsson 2008). The total size of the SRI market amounts to €4.96 trillion worldwide. The majority of investments, €4.58 trillion, stem from the US and Europe and only smaller amounts from the rest of the world (Eurosif 2008). Nonetheless, asset managers have been slow in terms of considering social responsibility. Still, today, when SRIs are rapidly growing they only constitutes between 11% (US) and 17% (Europe) of all assets under management.

At the European level, 'core SRIs' constitute only 19% of total SRIs or only 3.4% of the €13.5 trillion assets under management, equaling €459 billion. Hence, the remaining €13 trillion are under traditional management or under the management of 'mainstream SRI investors' and thus this large group will be the focus of attention (Eurosif 2008).

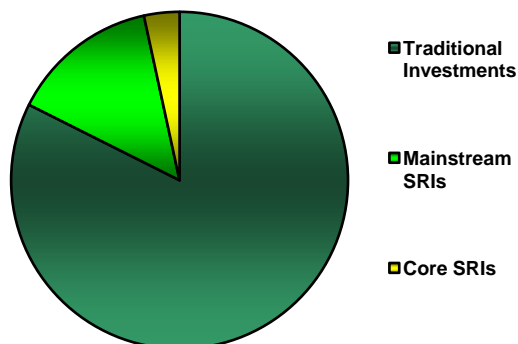


Figure 3: Market share of the €13.5 trillion assets under management in Europe. 'Mainstream SRIs' constitute 14.2% and 'Core SRI' only 3.4% of estimated total assets under management. Source: Eurosif (2008)

Many trends point towards a growing attention to SRI: More investors believe ESG issues can affect the performance of investment portfolios (UNEP FI 2007), the number of UNPRI signatories is growing (UNPRI 2008), a report from Business for Social Responsibility (BSR) concludes that there seems to be buy-in of the ESG concept from institutional investors (BSR 2008) and the Carbon Disclosure Project (CDP) reports that 77% of investors factor in climate change information into their investment decision (CDP, Mercer 2009).

In short, investors acknowledge 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 (BSR 2008). 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 (BSR 2008). Only Sustainable Asset Management (SAM), who makes the ratings behind the Dow Jones Sustainability Index (DJSI), has reached the ten-year threshold this year with a comprehensive dataset, so data is limited. Importantly, the inherent long-term nature of social responsibility is at odds with the short-termism reigning the mainstream investment community (BSR 2008, WEF & AccountAbility 2005, Hummels & David 2005).

Problem of hidden value

Illustrating the problem, the perception of company value by company managers consists mostly of value that can be linked to financial performance (WBCSD 2009a, 2009b).

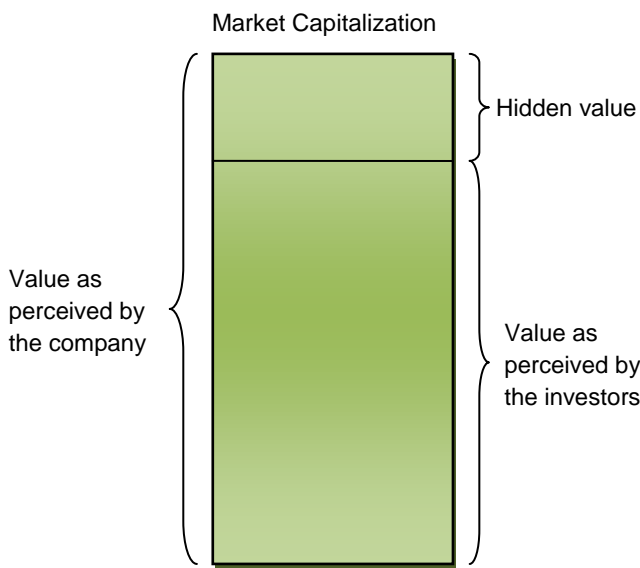


Figure 4: Illustration of the mismatch between CSR value perceived by the company and CSR value realized by investors and analysts. Source: Own model.

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, 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.

Theoretical analysis

Strategic value creation

The empirical analysis showed that there is a difference between companies and investors in the perceived value of CSR. When looking at companies their role in society has changed considerably from 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. We argue that companies can be placed along a curve in a diagram of value and CSR initiatives as illustrated in the diagram below.

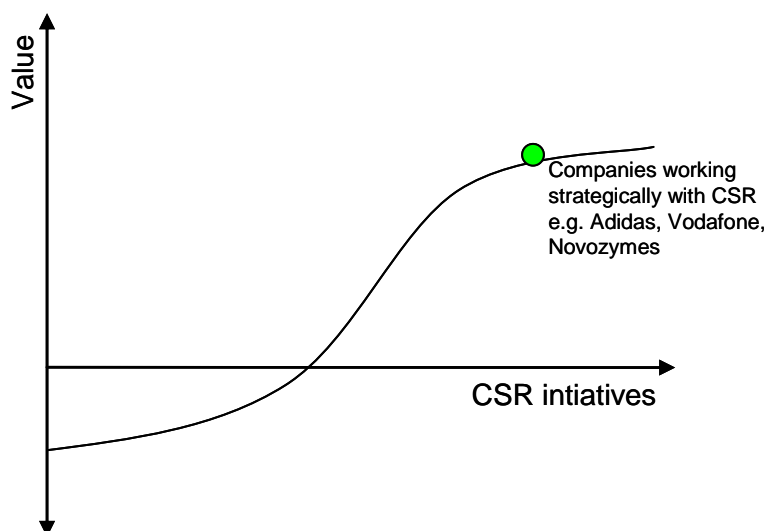


Figure 5: Diagram illustrating value of CSR work undertaken. Source: Own model.

The initial responsive CSR initiatives related to corporate citizenship will often have no valuable effect on society, which is illustrated as the curve starts out flat. As the company undertakes more CSR initiatives it will start mitigating harm from the value chain. The curve starts out below zero which indicates that the company inherently has harmful effects on its surroundings but as the company moves upwards, it is mitigating damage from value chain activities, and starts to convert these activities to benefit society. 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 the marginal benefits of further CSR initiatives are significantly harder to identify and derive value from compared to the same amount of improvement done by a company in the negative end of the graph.⁴ Companies in the poor end of the scale work with CSR only in order to mitigate risk and the companies in the top end of the scale approach CSR in order to obtain and embrace opportunities. 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.

The relationship between CSR and Economic Performance

When turning to the investors' point of view, we argue that companies working strategically with CSR can have value that is currently not realized by investors. Different investors' perspective on the relationship between CSR and economic performance of a company can be described by integrating their perspectives into Schaltegger & Wagner's (2006) model of a 'traditionalist view' and a 'revisionist view'. The understanding of how the different investors view the relationship between CSR performance and economic success is used to generalize the way they make investment decisions.

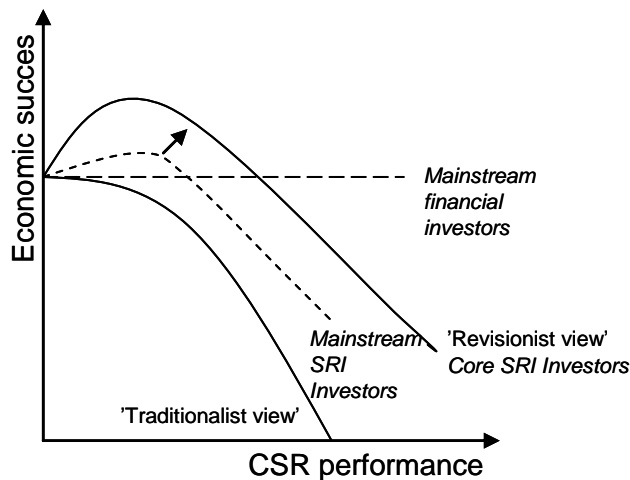


Figure 6: Relationship between CSR performance and economic success containing the 'traditionalist' and 'revisionist' view, as well as the three types of investors. Source: Figure modified from Schaltegger (2006) & Wagner (2006)

The view of 'mainstream financial investors'⁵ can to an extent be categorized as a 'traditionalist view' as they believe that increasing CSR performance will lead to nothing but increased costs and therefore deteriorate economic performance. However, increased CSR performance may not be viewed detrimental to the economic performance, 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 is more correct to illustrate 'mainstream financial investors' as a straight line in the figure, as CSR is neither a negative nor a positive influence on economic performance.

Many mainstream investors do however consider ESG factors albeit to a limited extent. These are categorized as 'mainstream SRI 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 either perceive these companies to be more valuable investments (BSR 2008), or 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 the 'mainstream SRI investors' can therefore be placed in between the 'traditionalists view' and the 'revisionist view'. They are currently closer to the 'traditionalist 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.

Existing investment decision models

When considering SRI practices of including ESG criteria, screenings are ways of selecting stocks, and 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 the decision entails both a socially responsible element (selecting stocks due to ESG

criteria) and a financial analysis. In the dual decision model the decisions are sequential beginning with firstly considering the intangible ESG information, and secondly undertaking a financial analysis. Contrarily, investors that only use financial data when making investments can be characterized as applying a ‘single decision model’ as they only value financial criteria.

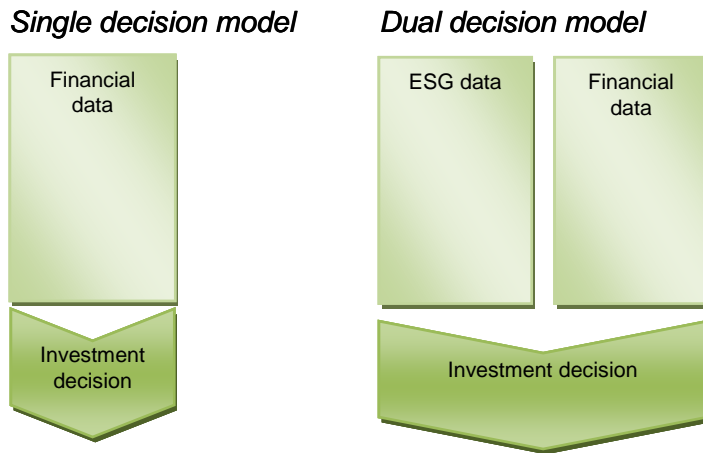


Figure 7: Illustration of the factors included in the single and dual decision models. Source: Own model.

A table by Renneboog et al. (2008) addresses why investment decisions can vary among different kinds of investors as it shows the portfolio management of conventional funds and SRI funds and how each parameter of financial data and CSR is weighed.

Companies	Positive NPV	Negative NPV
Positive CSR	(A) both SRI and conventional funds invest	(C) only SRI funds with positive screens invest
Negative CSR	(B) only conventional funds invest	(D) neither conventional nor SRI funds invest

Table 1: Table categorizing SRI funds and conventional funds according to the considerations of net present value (NPV) and CSR. Source: Renneboog et al. (2007, 2008)

It is illustrated that SRI funds are willing to sub-optimize on the financial performance of the company (C) and SRI funds forego the possibility to invest in company (B). However, 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 (Renneboog et al. 2008). 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 and *when* the investment is supposed to obtain a positive NPV as some SRI funds have a much longer time horizon than conventional funds. Thus, SRI funds act in the belief that they have selected superior stocks due to the screening process meaning 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.⁶ 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' is at odds with the efficient market hypothesis (Renneboog et al. 2008).

What seems to be the problem is that even though there is full and free information flow, the largest part of investors does not use ESG information for anything, and 'mainstream SRI investors' only use the information to a limited extent. This indicates that the SRI practices used by 'mainstream SRI investors' are not sufficiently capable of extracting value-creating information because if they were, all investors would use them.

Thus, we argue, that the dual decision model, as used by 'mainstream SRI investors', is not sufficiently sophisticated and capable of capturing the value created by CSR and conclude that there currently is a lack of methods to include ESG data into investment decision-making that is widely accepted among mainstream investors.

Need for a new model

Investors' existing ESG methods have been identified as a single and a dual decision model, although what seems to be needed is something that currently does not exist. Therefore, 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 considers both ESG data and financial data but, contrary to the dual model, makes the two decisions simultaneously.

Integrated decision model

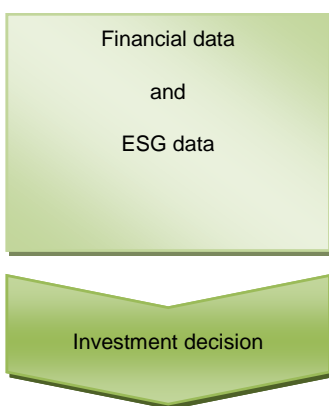


Figure 8: The integrated decision model. Source: Own model.

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. 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 - is needed.

Based on the following four arguments we suggest that the model should be integrated, but should not be based on existing financial analytical models, as these have not proven sufficient. The integrated decision model is further supported by the argument that it is only possible to reasonably optimize on a single objective.

The next frontier – a matrix model?

An expert interview with Mr. Steve Lydenberg from Domini Social Investments, and Ms. Céline Louche from Vlerick Leuven Gent Management School, revealed strong support for an integrated decision model.⁷ 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. 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. However many challenges to such a model remains unsolved.

An integrated method - not based on traditional financial analysis

Chousa & Castro (2006) on the other hand, have made one of the few existing attempts to conceptually link CSR and economic performance. They have developed a three dimensional model to focus on the financial and non-financial benefits of social and environmental activities when selecting stocks. The model is based on the well-known DuPont ratio decomposition system (Ravn Elkjær & Hjulsager 2004). However the ratio decomposition turns out to be a very complex system. Moreover, the model has not yet been tested empirically or validated through the application of artificial intelligence all though the authors believe it would be possible. Also the backward looking approach based on past accounting figures is especially questionable for new issues such as environmental changes (Schaltegger & Figge 1997). Overall, it is a very complex, untested and vague model to evaluate social and environmental benefits.

Schaltegger & Figge (1997) have made a framework that focus on bringing environmental impact into company valuation, by using the concept of shareholder value developed by Rappaport (1986). In an extended edition of his work Schaltegger (2006) has developed a model that links sustainability management and shareholder value.⁸ Environmental and social management will influence decisions within strategy, investment, operations and financing, which target the economic levers and in turn influence both shareholder value and the competitiveness of the company (Schaltegger 2006). The model has the advantage of being based upon the sustainable increase in shareholder value, which is future-oriented. A disadvantage is the future cash flows and discount rates are influenced by management expectations that may not recognize current environmental influences on future company development. Moreover, no methodology is given to how the model functions in practice.

We believe that the two attempts to integrate ESG data into traditional financial analysis models are clear signs that an integrated model is needed. However, as these two 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.

An Integrated Method with a Single Objective

Jensen (2001) 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*" (Jensen 2001).

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. Thus, logic decisions can only be taken when one single objective is pursued, which favors the argument of an integrated decision model over a dual decision model.

Findings from case study

The Danish mid-size biotech case company, Novozymes, produces industrial enzymes and microorganisms that are sold to more than 40 different industries worldwide. Novozymes has been listed on the Danish stock exchange since 2000 when the company was de-merged from Novo Nordisk. The company is owned mainly by Novo A/S⁹, which holds all of the A-shares and some B-shares and the majority of the votes with 70.1% (Novozymes 2009). The 7 investors interviewed totally own at least 7.6% of the B-shares not held by Novo A/S or Novozymes.¹⁰ 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’.¹¹

Name	Country	Function	Time horizon	Signa-tory	Inclu-ding ESG	ESG Research	ESG method
Interview 1	USA	Sell-side Analyst	Short-term	None		None/ Governance Analytics	None
Interview 2	France	Sell-side Analyst	Short-term	UNPRI	✓	Yes/No questionnaire /GIM (Governance Metrics International)	None/in-house
Interview 3	Denmark	Investor/ Fund-manager		None	(✓)	Thematic Fund	Industry related
Interview 4	Denmark	Investor/ Buy-side Analyst	3 years	About to sign UNPRI	✓	Bought from GES	Negative screening/ stakeholder activism
Interview 5	Denmark	Investor/ Buy-side Analyst	3-5 years	UNPRI	✓	Bought from GES	Negative screening
Interview 6	Denmark	Investor	5 years	UNPRI, CDP	✓	Bought from GES	Negative screening/ stakeholder activism
Interview 7	Denmark	Investor	More than 10 years	UNPRI	✓	In-house/ Bought from Eiris	Negative screening/ stakeholder activism
Interview 8	Scotland	Investor/ Buy-side Analyst (Investment Management Firm)	3-5 years	UNPRI, CDP	✓	Somewhat integrated	None/in-house
Interview 9	USA	Investor	Up to 40 years	UNPRI, CDP	✓	In-house/ISS (Institutional Shareholder Services)	Integrated method

Table 2: Overview of interviewed investors and analysts and their characteristics. Source: Own model

The interviewed investors and analysts can be categorized according to how they consider ESG information in their investment decisions, using the three identified investment decision models from the theoretical analysis, namely the single, the dual and the integrated decision models. 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.

Level of ESG considerations:			
None Significant			
Decision model:			
Single (financial decision)	Dual (separated financial and ESG evaluation)		Integrated (integrated financial and ESG evaluation)
Type of investor:			
Mainstream financial investors	Mainstream SRI investors	Core SRI investors	Integrative investors
Analyst 1 Investor 2	Analyst 3 Investor 4 Investor 5 Investor 6 Investor 7		Investor 8 Investor 9

Figure 9: Continuum of level of ESG integration according to decision model of the interviewed investors. Source: Own model.

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. Thus this analyst is applying the single decision model. The sell-side analyst operates with a short-term horizon, which only allows analyzing 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.” 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. 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. 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.

Mainstream SRI Investors

As seen in the categorization of the interviewees according to the three decision models above, the vast majority of investors and analysts interviewed are situated within this category. According to a sell-side analyst, ESG factors are given some kind of value in the form of check mark or yes/no questions, and mostly relate to whether the company comply with industry directives and basic regulation. The 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 the analyst states “[...] we have simply begun the process of integrating what you call ESG factors into our research”.

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, and as such the mainstream SRI investors is an extremely diversified group. Operating with a medium to long time-horizon allows some of the interviewed mainstream SRI investors, to

take long-term drivers into consideration. However, the use of ESG methods varies significantly. In general, no screening tool is applied on stocks of national companies, except from one single investor, as the investors feel that they have good relations with national companies. Thus most investors use negative screening on its foreign stocks and have an agreement with a screening agency to make use of shareholder activism if needed.

An investor describes his ESG methodology as systematic. However, you can question the systematic element as 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. However: “On a daily basis we work with gut feelings.”* Hence, it can be discussed to what extent the investor in question is investing socially responsible.

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.”* 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.”* 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. An issue of one company rarely corresponds exactly to an issue of another company, and therefore the impact assessment of a risk parameter or an opportunity is case-based.

How ESG parameters could be factored into financial models

Most mainstream SRI investors have many ideas to 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, a measure of the volatility, or systematic risk, of a portfolio in comparison to the market as a whole, might also be lower (Moffett, Stonehill & Eiteman 2006). 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 are 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.

When asking 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 SRI investor community is at a very early stage of working with ESG factors. 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.

Integrative Investors

There are examples of investors that succeed in working systematically with ESG factors in their valuation practices. One interviewed investor applies a model similar to the Discounted Cash Flow model with three time stages; short-term, long-term, and very long-term, focused on return on capital employed (ROCE).¹² In this method, addressing ESG factors is seen as a necessary means 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."* 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 behavior 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."* 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 people better? It is really hard. They are happier and it may be related to productivity."* 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."*

Barriers and drivers of ESG integration

The barriers of integrating ESG factors from the empirical analysis are confirmed in the interviews; *"For me to use it [ESG data] there has to be a defined set of parameters that are transparent and comparable."* This expresses one of the barriers that is outspoken by investors in general, namely the lack of comparability. Another investor points out that *"historically, sustainability focused companies have not outperformed the overall market"*, which underlines another barrier put forward, namely a proof, that these companies perform at least as good as the market, is needed before these investors would consider investing in companies with a strong CSR performance.

Moreover, the amount of consideration given to ESG 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. It is characteristic to see that the more comprehensively the ESG data are considered by the investors; the more integrated the investment decision becomes.

Addressing 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. 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."* The investors are more positive towards the change albeit: *"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."* Thus 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.

Conclusion

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 shows 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, there is a mismatch of perceptions between the company and the investor community. Investors mainly value what is financially material or a proven management practice, whereas companies that work strategically with CSR are aware of the additional value created through their CSR work, and these companies may generate 'hidden' value that is currently not realized by investors in a traditional financial valuation.

When investigating the relationship between CSR performance and economic success it is found that since '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 not all investors are able to extract value creating information from ESG factors even though the information is available. Thus, there is a need for a new decision model that to a larger extent includes ESG factors. An 'integrated decision model' that pursues a single objective and integrates financial data and

ESG factors is suggested. 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.

By applying the three identified decision models to a case study of Novozymes' investors and analysts it is clear that 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 these investors 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.

Discussion

This research has naturally posed a lot of unresolved questions and may spur further research. We believe we are facing a shift in paradigms and the coming years, possibly decades, will question the financial centric view on company valuation. Therefore this highly unexplored field contains immense opportunities for further research. First of all it would be obvious to investigate what an integrated decision model may look like and how it may function both theoretically and in practice, as there is a great need for such a model. Moreover, many endeavours lay ahead for the ones seeking to theoretically link CSR and economic performance. With this research we hope to have contributed to the first step towards bridging the gap between companies and investors in obtaining a mutual understanding of the value of CSR, and integration of ESG factors in investment practices.

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¹ Transcripts of the 5 expert interviews can be found in the original work: <http://studenttheses.cbs.dk/handle/10417/789>

² Transcripts of the 9 investor interviews can be found in the original work: <http://studenttheses.cbs.dk/handle/10417/789>

³ The map is by no means exhaustive, as it only includes the main drivers and agents we find relevant for the problem at hand.

⁴ The shape of the curve was supported by an interviewee (Investor interview 7)

⁵ See figure 2 for a categorization of the three groups of investors.

⁶ 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.

⁷ Expert Interview with Mr. Steve Lydenberg & Céline Louche on May 19, 2009 and notes from Lunch-Meeting May 18, 2009 Copenhagen Business School.

⁸ Shareholder value = $\sum_{t=1}^n (\text{Free Cash Flow}_t / (1+i)^t) - \text{Borrowed Capital}$ (Schaltegger 2006)

⁹ The holding company is owned by the Novo Nordisk Foundation.

¹⁰ The investors hold at least 6.3% of Novozymes' B shares which equals to 7.6% of the B-shares not held by Novo A/S or Novozymes. Novo A/S holds all A-shares and 10.7% of B-shares whereas Novozymes holds 5.9%.: Calculation: $6.3\% / (100 - (10.7 + 5.9)) = 7.55\%$

¹¹ The entire case study section is based on the 9 investor interviews - transcripts can be found in the original work: <http://studenttheses.cbs.dk/handle/10417/789>

¹² 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.