Rotterdam School of Management
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Erasmus Platform for Sustainable Value Creation

Thesis working paper

SDG Investing in practice

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RSM - a force for positive change

RSM Erasmus

Thesis working paper

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EY Climate Change and Sustainability Services

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1 Summary

Since the introduction by the United Nations in 2015, the seventeen Sustainable Development Goals (SDGs) have received much attention from businesses, governments and civil society. The SDGs and the Paris Agreement accelerated the developments in sustainable investing. However, the challenge on how to turn these goals into investment decisions remains. The empirical research in this field is emerging but still limited. This research therefore examines the following research question: how does integration of the Sustainable Development Goals shift attention in investment decisions? The shift in attention is based on the attention based view of the firm by Ocasio (1997). Central to this model is the notion that decisions makers have limited attention. Thus their attention is guided by the available issues and answers, the attention structures which are in place and procedural and communications channels. Research on integrating the SDGs in investment decisions so far present approaches based on ESG information (environmental, social and governance information of companies) or by tagging the positive and negative impact for each SDG. This study examines the research question by answering two sub questions: (1) How do the SDGs shift attention in investment decisions and (2) What is the variance in how the SDGs shift attention in investment decisions?

These questions are applied at the SDG equity strategy (case study A) and SDG credits strategy (case study B) of two Dutch asset managers which are comparable in size. In both cases, an SDG investment fund was launched in the past two years. The research methods used were semi-structured interviews (8 interviews in both cases), ethnography (at case study A) and document analysis (respectively 13 documents for case study A and 11 for case study B). All interviews were transcribed and each statement in the interviews and documents was given a code, which describes the statement in a few words. This lead to over 500 and 400 codes for respectively case study A and B. These codes were then aggregated into themes, which lead to the findings of the research.

The findings of this thesis answer the two sub questions. Firstly, the SDGs shift attention as the SDGs provide both new issues and answers available to decision makers. By shifting the attention from factors of the company (ESG information) to wider world issues (SDGs), the SDGs shift attention towards impact and provide answers to these issues (sub goals SDGs). Investors therefore look for impact measurement methods to measure the impact on the SDGs. Investors set up a separate investment strategy for SDG investing in which the SDGs are integrated in two ways: SDGs are used as a selection criterion and integrated in a qualitative manner in the fundamental analysis. At case study A they use the SDG selection as a starting point of the firm analysis, at case study B they set up the SDG Guidebook which forms the basis of the SDG strategy. The SDG Guidebook is a

set of rules per sector how to determine the most important contributions or detractors to the SDGs.

In answering the second research question, there are three differences between the case studies that stand out. First, at case study A the aim is to achieve a maximum positive impact, formulated as a general impact to certain SDGs. The ability of a firm to contribute to the SDGs is seen as a fundamental driver of firm value. At case study B, the SDGs are seen separate from the fundamental drivers of corporate bond value. The fund aims to contribute to the SDGs, which is specified through KPIs per sector. Second, at case study A the team is the sustainable investing team and thus focuses only on the sustainable strategies. At case study B the team executes all credit funds, both for sustainable funds and other funds. Third, the company of case study B has structured its processes; it has credit committees and an SDG committee that take decisions at certain points in time. At case study A, there are no separate meetings on the SDGs and portfolio managers take investment decisions at any point in time.

One of the limitations of this research is that it analyses one credit and one equity fund, whilst two credit funds or two equity funds would have provided a more clear comparison. Secondly, because of the focus on investment decisions on department level in this study, the influence of the organization and the external environment on the SDG strategy is not addressed. Further research into these factors would provide relevant information. More research into SDG investing in different asset categories and at different asset owners or managers (for example non-commercial) would improve the empirical work in the field.

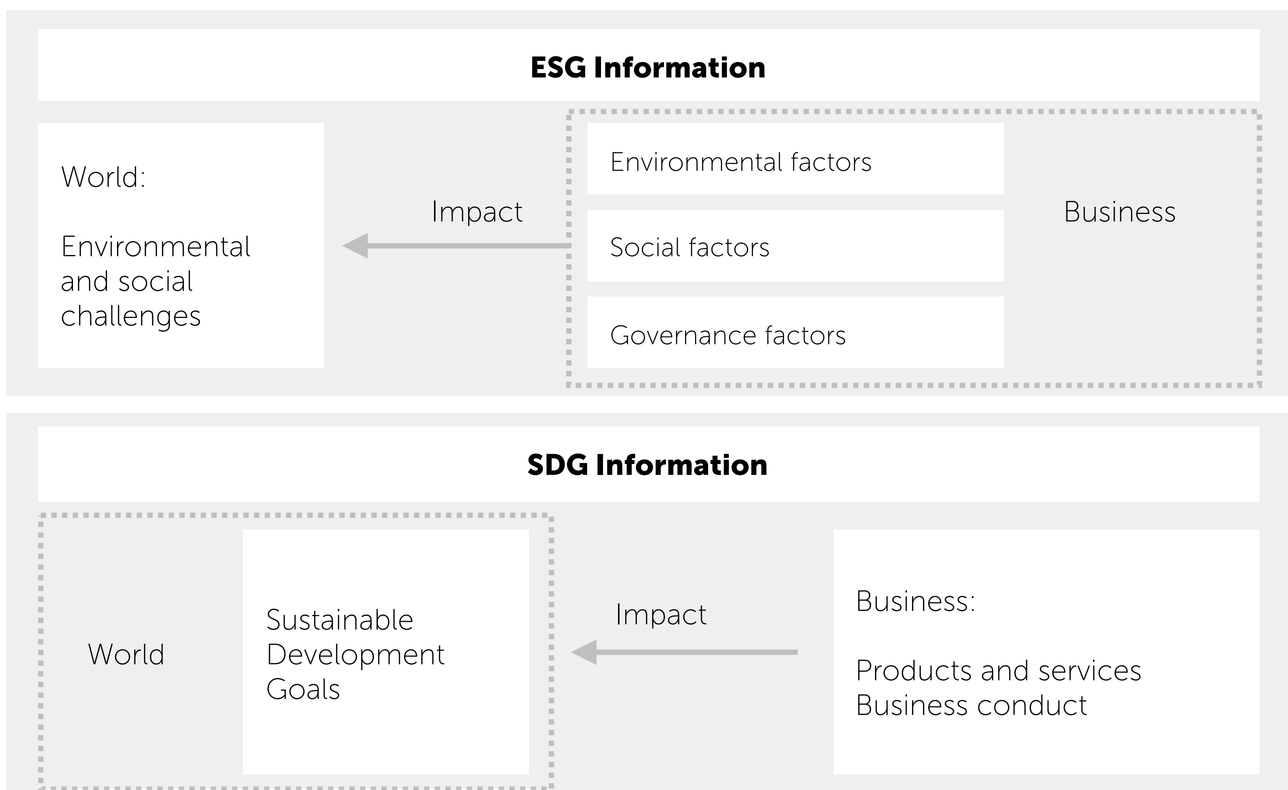

FIGURE – ESG INFORMATION AND THE SUSTAINABLE DEVELOPMENT GOALS VISUALIZED

From this study, I draw two implications for research and two practice-oriented implications. First, this research shows that the Ocasio model is suitable for analysing daily investment decisions. In fact, using this level of analysis makes the notion that decision makers have limited attention more explicit. Secondly, this research is providing early evidence on SDG investing. It shows that SDG information is fundamentally different than ESG information, in that it directs attention to the world's social and environmental challenges and hence, gives a renewed focus on business' products and services. The first practical implication is on the relevance of SDGs in fundamental research. Although respondents differentiate and state that the SDGs have a smaller impact on bond value, the research by Merton (1974) shows that asset valuation shocks impact both equity and bond value. A more consistent application of sustainability information at different asset categories improves investment practices. The second practical implication is on the development of SDG investing in light of the limited attention that investors have. Developing specific 'SDG ratings' might take long to develop and in the end provide investors with information that have the same issues as ESG ratings. Therefore, focussing attention to development of sustainability metrics that provide factual business information might increase matureness of sustainability information in the long run.

2 Abstract

Although the Sustainable Development Goals (SDGs) have received much attention since initiation, the challenge on how to turn these goals into investment decisions remains. This working paper is based on empirical research of two asset managers that each have an SDG investment strategy where they integrate the SDGs in investment decisions. At case study A, this is a SDG equity strategy and at case study B a SDG credits strategy. This research focuses on the shift in attention of investors, based on the attention based view of the firm by Ocasio (1997). Findings show that through this SDG investment strategy the attention of investors is shifted from factors of the company (covered more in ESG information) to wider world issues (SDGs). As a consequence, the SDGs shift attention towards impact and provide answers to these issues (in the sub goals of the SDGs). Investors set up a separate investment strategy for SDG investing in which the SDGs are integrated in two ways: SDGs are used as a selection criterion and integrated in a qualitative manner in the fundamental analysis. At case study A, the asset manager is focused on achieving maximum positive impact, while at case study B the asset manager focuses more on a positive contribution to the SDGs.

This research has two implications. First, it shows that SDG information is fundamentally different than ESG information, in that it directs attention to the world's social and environmental challenges and hence, gives a renewed focus on business' products and services. The second implication relates to the development of SDG investing in light of the limited attention that investors have. Developing specific 'SDG ratings' might take long to develop and in the end provide investors with information that have the same issues as ESG ratings. Therefore, focussing attention to development of sustainability metrics that provide factual business information might increase matureness of sustainability information in the long run.

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3 Introduction

'If you look at the SDGs explicit and steer on impact, then you see things you wouldn't have seen otherwise. The story of nothing new under the sun is right in theory, but not in practice. All of this is still part of the fundamental analysis, only you are way more explicitly taking these aspects into account. You are conscious that these are great risks and opportunities that could play out in the future. Before, these were simply insufficiently looked at.'

QUOTE PORTFOLIO MANAGER

Since the introduction by the United Nations in 2015, the seventeen Sustainable Development Goals (SDGs) have received much attention from both businesses, governments and civil society. The SDGs serve as a common language and are seen as a normative framework of the social and environmental challenges that both governments, civil society and business should tackle, in both developed and developing countries (Schramade, 2017). The SDGs and the Paris Agreement accelerated the developments in sustainable investing, but the challenge remains on how to turn these goals into investment decisions (UBS, Axa IM, Aegon AM, PRI, Triodos IM and US SIF, 2018). There is an increased call for asset managers to contribute to these goals. Several investment companies have started to integrate the SDGs in investment decisions, either by linking their investments to the SDGs or by looking for specific investments that impact one or more specific SDGs (Klop, 2018). In the Netherlands, the Dutch Central Bank jointly with representatives from Dutch financial institutions and companies formulated a list of possible KPIs to measure SDG contribution (Sustainable Finance Platform, 2017). However, the empirical research on what integrating the SDGs into investment decisions entails is still limited. An understanding of how the SDGs shift attention in investment decisions provides insights that are necessary before turning to more quantitative methods in examining SDG investing. Although the traditional focus in finance is on quantitative research, quantitative research needs qualitative research to discern meaning, concept forming and relations between concepts. Therefore, this research focuses on the following question: How does integration of the Sustainable Development Goals (SDGs) shift attention in investment decisions?

Attention is defined as the 'noticing, encoding, interpreting and focusing of time and effort by decision-makers to both issues and answers' (Ocasio, 1997, p.189). Issues and answers are the available problems, opportunities and action alternatives for decision makers. Ocasio argues that attention is limited and decision makers cannot take into account all (relevant) information. Investors have to take investment decisions on a daily basis, but are limited with respect to the information that they can take into account. An investment strategy based on the SDGs can therefore shift the attention in the investment decision process and thus influence investment decisions.

4 Attention based view of the firm

4.1 The attention-based model

Investors have limited attention in the process of selecting investments. They make decisions on where they direct their attention to before making an investment decision. Ocasio (1997) developed the attention-based view of the firm (ABV-model). Building on the work of Simon (1947) on bounded rationality, he argues that attention is limited and decision makers cannot take into account all (relevant) information. He differentiates between the focus of the decision maker, the influence of the social context and organizational factors. Ocasio (1997) developed a model for decision making in firms where these characteristics are translated into different aspects of the decision making process. A simplified version of his model (Figure 4.1) shows that the environment of decision, issues and answers and attention structures influence procedural and communication channels and vice versa. The investment decisions are influenced by the issues and answers, attention structures and procedural and communication channels. The environment of decision for SDG investing is for example the current practices in integrating sustainability issues into investment decisions. This environment is outside the scope of analysis of this research. Ocasio (2011) differentiates between two different forms of attention. The first creates top-down attention through procedures and set up. The second form of attention creates bottom-up sustained attention by decision makers because of the issues and answers that they focus on. I now discuss the relevant aspects of the ABV-model in turn.

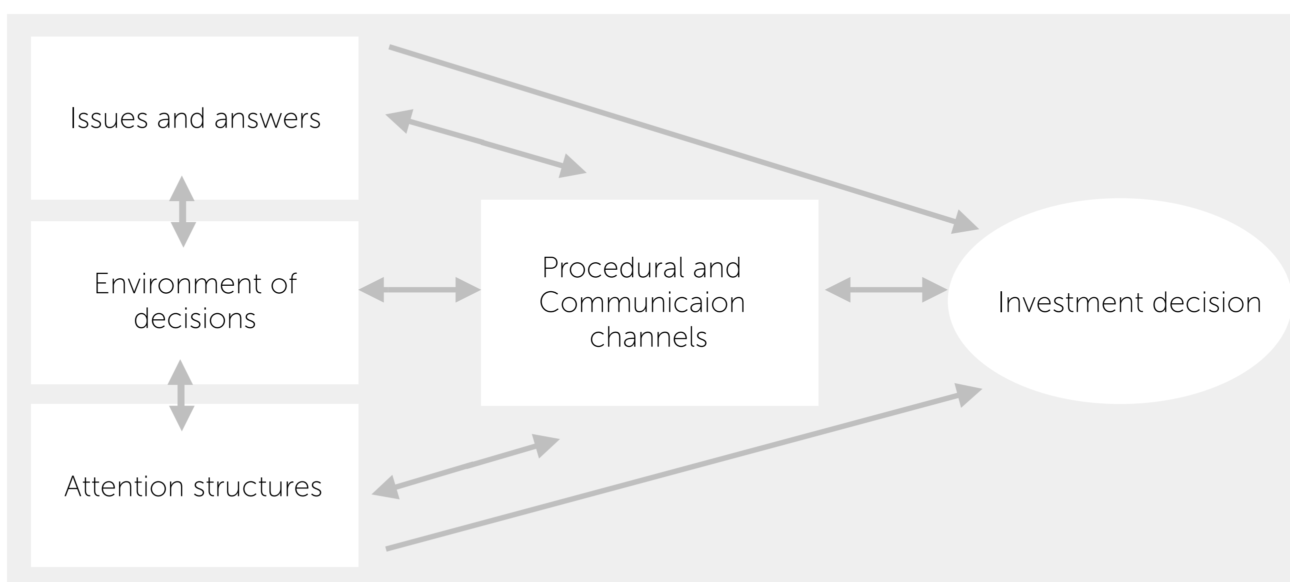


FIGURE 4.1 ATTENTION-BASED VIEW (OCASIO, 1997)

4.2 Aspects of Attention-based model

4.2.1 Issues and answers

Issues and answers are the cultural and cognitive concepts that decision makers use to make sense of issues and to formulate answers to issues. This set of concepts determine which issues decision makers focus on and what possible answers they consider. As such, issues and answers also co-shape the procedural and communication channels and vice versa (see Figure 4.1, arrow points in both directions).

4.2.2 Procedural and communication channels

These are all the interactions and communication taking place in the firm that lead up to a decision, such as formal and informal meetings, reports and procedures. Inputs for these are the environment of decision, attention structures and issues and answers (see Figure 2.1). Decision makers use them in determining which answer fits their issue, but they also co-determine them by discussing and deciding on procedures and communication practices (see Figure 4.1, arrow goes both ways). Procedural and communication channels are determined by spatial, temporal and procedural dimensions (Stinchcombe, 1968). Spatial dimensions concern the availability of issues and answers to decision makers. Temporal relates to the time (limits) for the decision making process. Procedural dimensions are the form and duration that the decision is taken in.

4.2.3 Attention structures

Attention structures are the 'social, economic and cultural structures that govern the allocation of time, effort and attentional focus of organizational decision makers' in the process of making decisions (Ocasio, 1997, p. 195). In this thesis, I examine in particular the rules of the game and resources, which both influence procedural and communication channels and the investment decisions (see Figure 4.1).

Rules of the game

The rules of the game are the actions, interactions and interpretations that 'guide and constrain decision-makers in accomplishing the firm's tasks and in obtaining social status, credits and rewards in the process' (Ocasio, 1997, p. 196). In the case of investment decisions, it relates to the common understanding of how investing in either equities and corporate bonds should be done and what achievements in are considered better investment returns.

In equity investing, the equity holders are the residual claimholders of a company's capital. Therefore, they bear most of the risk but also gain most if the company becomes more profitable. To compute the equity value, an investor calculates the company value as a whole in future discounted cash flows terms, subtracts its debts and minority interests and what remains is the equity value (the discounted cash flow model, or DCF) (Schoenmaker & Schramade, 2019a). Another method is to use multiples, in which an investor determine the stock value by using relative

measures, such as the price earnings ratio (stock price divided over earnings). The equity value is driven by sales, margins and capital characteristics (so both by cost of capital and capital structure) (Koller, Goedhart, & Wessels, 2015). Therefore, investors look at companies' business models and their position in the market, as these determine the equity value and its expected ability to create long-term value (Schoenmaker & Schramade, 2019a).

The providers of corporate bonds or credits also provide a company with capital to finance the business model. The bond value changes over the term of the contract, and is determined by how investors view the creditworthiness of the party and the size of the credit spread. The credit spread is the difference between yields of a government bond with the same duration as the bond, and is determined by the company's liquidity and credit risk. Liquidity risk refers to the fact that bonds in smaller companies are harder to trade and, since there are fewer parties that trade, transaction costs might be higher. Credit risk refers to the company default risk, since in that case the bond holder will not receive its money back (Schoenmaker & Schramade, 2019a). Merton (1976) applied the Black-Scholes model asset valuation shocks of firms and showed that these shocks affects both equity and debt value. Therefore, not only default on a loan but also common asset valuation shocks affect the corporate bond price.

Resources

Firm resources are the 'tangible and intangible assets that allow the firm to perform its activities and to produce its goods and services' (Ocasio, 1997, p. 198). For an investor, this relates in the first place to knowledge that he has on the market, either in experience of analysts, systems and sources available to analysts and Research & Development (R&D) of a firm.

5 The Sustainable Development Goals

After the Millennium Goals term reached their end by 2015, the United Nations formulated seventeen short sentenced Sustainable Development Goals (SDGs). The ultimate goal of the SDGs is as follows:

'We resolve, between now and 2030, to end poverty and hunger everywhere; to combat inequalities within and among countries; to build peaceful, just and inclusive societies; to protect human rights and promote gender equality and the empowerment of women and girls; and to ensure the lasting protection of the planet and its natural resources. We resolve also to create conditions for sustainable, inclusive and sustained economic growth, shared prosperity and decent work for all, taking into account different levels of national development and capacities.'

UNITED NATIONS GENERAL ASSEMBLY, 2015, P. 3

The UN classifies these solutions in terms of people, planet, prosperity, peace and partnership. Each goal has sub goals, which sum up to 17 goals with 169 sub goals (see Appendix 2.1). In doing this, the UN broadened the goals ownership and formulated them in a positive manner. Business models help in creating long-term value creation and can thus contribute in the achievement of these goals (Schoenmaker & Schramade, 2019b). Many of the SDGs are in fact common goods, which are non-excludable and rivalrous, such as fish stock and water resources (Cornes & Sandler, 1986). The problem of these goods is that not one sector takes natural responsibility for them, but that they are a joint responsibility of businesses, governments and civil society (Van Tulder, 2018). Hence, when viewing the SDGs, businesses are asked to take their role in the provision of private goods and common goods (Scheyvens, Banks, & Hughes, 2016). Soon after its publication, the contribution of the private sector to the SDGs were subject of a wide debate. Only three years later, PwC found that 72% of global companies include the SDGs in their reporting (n=729) (PwC, 2018). First research into companies' goals with regards to the SDGs show that companies primarily formulate internal SDG targets, mostly focused on avoiding negative impact on sustainable development (Van Zanten & Van Tulder, 2018).

The role of finance in achieving the SDGs is also increasingly emphasized. For example, the United Nations conference on Trade and Development indicated that US$5-7 trillion per year in investment is needed for achievement of the SDGs (UNCTAD, 2014). Several SDG methodologies are (being) developed to guide SDG-investing. I point out three examples. The first example is the SDG Compass developed by the World Business Council for Sustainable Development (WBCSD), the Global Reporting Initiative (GRI) and the UN Global Compact (UNGC). The Compass provides guidance for firms on how to integrate the SDGs, for example by mapping the SDGs against the value chain (WBCSD, GRI & UN Global Compact, 2015). The SDG Compass also links over 1500 business indicators to the

SDGs and its sub goals. Secondly, Betti & Consolandi (2018) developed a framework in which they map material ESG topics to the SDGs. They apply this framework on the health care and in doing so, argue that this framework enhances standardisation and data transparency (Consolandi et al., 2018). A limitation of both these approaches is however that common (ESG) metrics measure output, rather than outcome or impact (Betti & Consolandi, 2018). Another concern is that new SDG approaches which are based on ESG data inherently carry also the problems of ESG ratings. ESG ratings often lack transparency and independence and information is often simply added to a single score ignoring material topics (Khan et al., 2016; Kotsantonis et al., 2016; Windolph, 2011). Moreover, several studies indicate that the correlation between the ratings is considered low which gives them low validity (Chatterji et al., 2014; Consolandi et al., 2018; Dorfaleitner et al., 2016; Semenova & Hassel, 2015).

Thirdly, Schramade (2017) proposes an approach based on tagging: each company is tagged to each SDG on negative and on positive impact. This results in a generic picture on where the negative and positive impact of a firm is likely to occur. Schramade however points out that this method is a starting point in the ongoing process of finding KPIs that measure actual impact on the SDGs.

With the increasing attention to the SDGs comes also the concern of 'SDG washing', claiming a contribution to the SDGs while there is none or little more than with other investments. For example, a focus on doing good on one SDG might in fact lead to doing harm to another SDG (Buhmann, 2018). Buhmann (2018) therefore argues that this risk can be mitigated by applying guidelines in the investment approach, for example the OECD-guidelines and the UNGC. Besides this, transparency and consistency in the SDG methodology can increase the confidence in actual impact on the SDGs.

6 SDG Investing in practice

In SDG investing, investors may use one of the methodologies mentioned or develop their own SDG investment strategy. Integrating the SDGs can change the attention investors give to certain issues and answers and change the investment decision process characteristics. As Ocasio (1997) points out, in the end decision makers are influenced by attention structures on the individual, social and organisational level.

To examine this in practice, empirical research was conducted at two Dutch asset managers which were comparable in size. In both cases, an SDG investment fund was launched in the past two years. The research methods used were semi-structured interviews (8 interviews in both cases), ethnography (at case study A) and document analysis (respectively 13 documents for case study A and 11 for case study B). All interviews were transcribed and each statement in the interviews and documents was given a code, which describes the statement in a few words. This lead to over 500 and 400 codes for respectively case study A and B. These codes were then aggregated into themes, which lead to the findings of the research. The data structure (Table 6.4 and Appendix 1) illustrates the findings. In this chapter, the findings are presented in terms of similarities and of differences between the case studies.

6.1 Similarities SDG investing in practice

There are three common denominators between the case studies with regards to the integration of the SDGs in investment decisions. First, the SDGs shift attention to other issues and answers. Second, the SDGs direct attention towards impact. Third, the SDG strategy leads to a separate investment strategy.

6.1.1 SDGs change issues and answers

First and foremost, the SDGs impact the issues and answers available to decision makers. Previously, the main source of non-financial information was ESG information (see Figure 6.1). The SDGs shift attention from factors on the level of the company to the world's issues (see Figure 6.2). Moreover, it provides answers to the issues of the world rather than describing ESG factors on a corporate level. The differences raised by respondents on ESG information and the SDGs are summarized in Table 6.1.

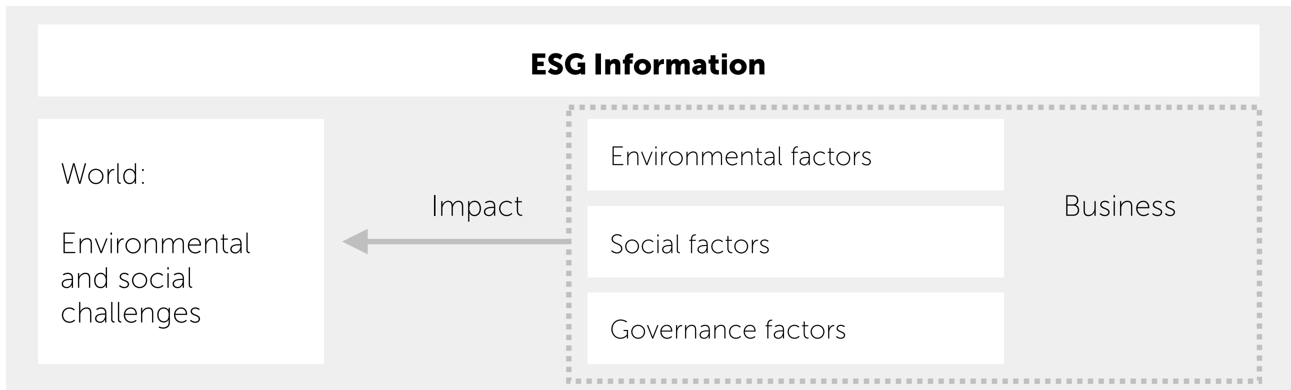


FIGURE 6.1 ESG INFORMATION VISUALIZED

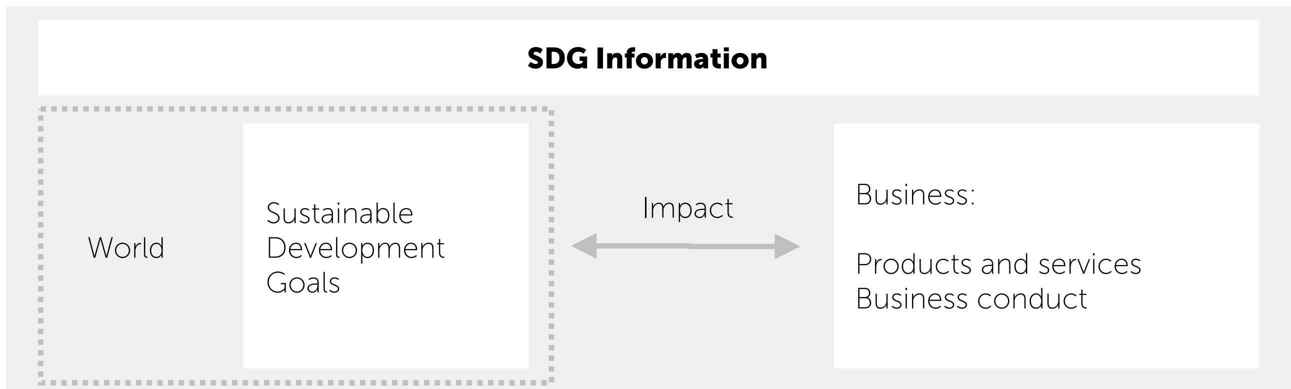


FIGURE 6.2 SDG INFORMATION VISUALIZED

ESG information	Sustainable Development Goals
ESG information relates to the company	Goals relate to the SDGs
ESG information directs attention to business conduct of company	Goals direct attention to impact of products, services and business conduct on SDGs
In the first place, impact of on ESG factors.	Impact is vice versa: the SDGs impact a company, and a company has an impact on the SDGs.
Describing indicators on corporate level	Describing impact on SDG sub goals
Often in detail, different ESG ratings	Currently in development, no standards available
Social, environmental and governance factors	Focus areas: people, planet, prosperity, peace and partnership

TABLE 6.1 DIFFERENCES BETWEEN ESG INFORMATION AND SDG INFORMATION

The visualizations and described differences on ESG information and the SDGs emerged from what respondents described as issues and answers that ESG and SDG information provide. When comparing both, respondents state:

> *'Between ESG and SDG, there doesn't have to be any kind of connection, since you measure something complete different. (...) With a ESG score, you don't do a normative judgement on whether the product the company produces is good or bad. You don't get bonus points if you by chance produce good products and neither points deduction if you produce oil, that is not what the ESG score is about.'*

> *'With ESG before we would (...) look at ESG risks, and suppose one is in emerging markets and the other not, then in the old methodology we would've said both, this is not a lot of risk from an ESG perspective. And now you say reasoning from the SDGs, we think one of the two is better because it has a better contribution to No Poverty, to Economic Growth and to Innovation and therefore, we prefer this one. That has to do with the first KPI that we have, because we have another, and in this way you can at least make a distinction.'*

Respondents describe issues and answers that the SDGs provide as follows:

> *'We start with the first step, which focuses at the products, so to what extent does the company contribute to the SDGs with the products that it makes and services it delivers. And then you already feel that a company, for example a grid operator contributes positively to the SDGs, since Clean Energy is one of the SDGs. A water utility company providing drinking water to us or in an emerging country, that of course positively contributes to the SDGs. However, if you are a company active in gambling, alcohol, tobacco or shale gas, then you have a negative contribution. Those are quite intuitive and logical things.'*

> *'Those SDGs are really the end goals saying, what resources do we need in order to achieve the SDGs.'*

Thus, the SDGs shift attention to the world's challenges and the impact of business models on these challenges.

6.1.2 Attention towards impact

Building on the shift in attention towards the issues of the world, the SDGs steer attention towards impact (measurement). Both companies state in reports a need for coordinated effort in this. They state, respectively for case study B and case study A:

> *'We believe that a more innovative reporting methodology, with a focus on measuring progress on the SDGs, would be a great boon to the impact investing world. In the coming years, we think the establishment of a European taxonomy is likely, which would create common ground for assessing the current situation and future progress.'*

'We were one of the first to launch an SDG Equities product and after that, we were the first to develop a model that allowed us to apply it to credits, too. That's great, but ultimately, the SDGs will only have a really significant impact once the EU develops a solid framework and we have generally accepted definitions. Only then will we be able to really measure sustainability and see the impact on the SDGs. So yes, we can play a part in this, every asset manager can make a contribution. But ultimately, there needs to be a coordinated effort, driven by EU regulations, that allows the government to draw on the expertise of industries such as ours.'

Currently, both firms disclose environmental aspects such as carbon footprint and waste footprint but are experimenting with the impact on other aspects. At case study A, they are experimenting with measuring the impact on the SDGs. In the process of seeking impact, the SDGs are

'more a yardstick, a measure and we have to use our impact criteria to see if the impact is real.'

In the process of seeking impact, the SDGs shift attention to answers and resources related to impact measurement. For the SDG strategy, investors use publicly available information such as the sub goals and its indicators. Investors also seek corporate information on for example the set of KPIs (case study B) or to indicate the size of the components of the impact mind map (case study A). An 'impact mind map' is a chart in which the size of the impact is split up into qualitative and quantitative components. For example, the companies impacting in particular SDG 3 Health & Wellbeing, the impact is measured as the quality of help they provide multiplied by the number of people helped. These are then split up again into indicators estimating its size. Investors at case study A actively try to increase the numbers of answers in the mind map, while the resources to find them are not always present. Hence, the answers, being cognitive schemas or options, are broader than the resources available (Ocasio, 1997). This results in an active process of the portfolio manager to look for resources that measure the contribution of the fund to the SDGs, which is also a form of external verification to its investors. Currently the fund reports the scores of ESG Screen 17. This start up links ESG data to the SDGs and by using this constructs a contribution score per SDG. An analyst describes:

'The concept has to be an impact concept, you have to be able to explain it to your clients easily and the measuring might come later then. I think that with ESG Screen 17, with the SDGs, that we can take a step, but of course it's quite hard to measure impact.'

Although ESG information is still used, it has a less prominent role in this strategy than in funds based on ESG information. An analyst at case study A describes:

'You use the ESG information, you look at it as a kind of double check. You think, OK, I think this is a very good clean company. And then you check Sustainalytics or MSCI ESG and often that confirms your view. If it does not on a few aspects, then you check these.'

Hence, the SDGs shift attention to impact and through this, investors are seeking for more resources with regards to the impact of companies on the SDGs.

6.1.3 Separate investment strategies

With regards to the procedures and communication channels, both asset managers set up a separate investment decision process for the SDG strategy (see Figure 6.3 and 6.4). The squares represent procedural and communications channels. The circles represent investment decisions.

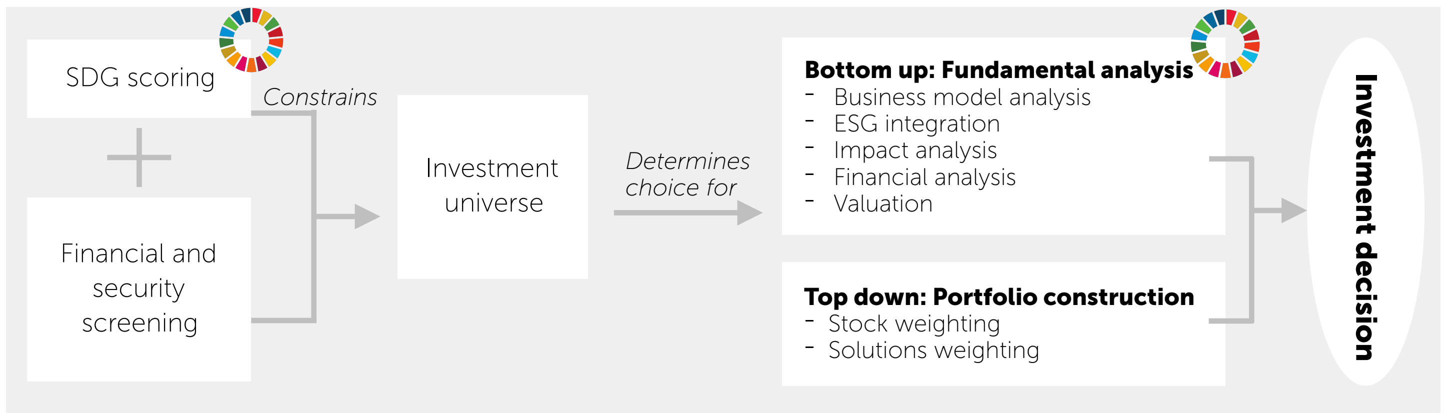


FIGURE 6.3 INVESTMENT DECISION PROCESS CASE STUDY A

SDG Committee

SDG Guidebook

Constrains

Investment universe

Provides input for

Is used in

Is used in

Bottom up: Fundamental analysis
- Corporate structure
- Financial profile
- ESG profile: ESG & SDG Information
- Business position
- Corporate stratety

Provides input for

Investment decisions

Top down: Credit quarterly outlook
- Credit beta
- Country allocation
- Top down themes

Credit committee

FIGURE 6.4 INVESTMENT DECISION PROCESS CASE STUDY B

In both cases, there are two procedures in the investment decisions process where the attention is directed towards the SDGs. The SDGs are used as a selection criterion and as a qualitative input.

SDGs as a selection criterion

First, the SDGs serves as a selection criteria. At case study A, this is part of the initial screening, together with a financial and quality screening. Every company is scored on a positive contribution to each SDG by assigning a score of 1 (positive impact) or 0 (no positive impact). Then, every company is scored on the negative contribution to each SDG by assigning a score of -1 (negative impact) or 0 (no negative impact). This results in a score ranging from -17 to 17. These score are set by a portfolio manager and then reviewed annually, so it shifts attention to the SDGs upon scoring and reviewing.

At case study B, the SDG score is the outcome of the proprietary SDG guidebook applied to a firm. This SDG score constrains the companies that the fund finds eligible to invests in, as it only invests in firms with a neutral (0) or positive (low 1, medium 2, high 3) score and excludes companies with a negative score (low -1, medium -2, high -3). The procedure to come to the SDG score consists of three steps:

Steps	Description
Product What do companies produce?	SDG guidebook: a starting score per sector and then KPIs per sector that add or subtract point on a min-max rule basis.
Procedure How do companies produce?	A qualitative assessment based on firm's governance framework, track record, environmental policies et cetera.
Controversies Are controversies known?	To correct for controversies, a qualitative assessment based on controversy ratings by RobecoSAM and Sustainalytics and the information from engagement with companies.

TABLE 6.2 STEPS OF SDG METHODOLOGY

A company starts with a general sector score after which a maximum of five KPIs indicate further positive and negative contribution to the SDGs. For example, the banking sector receives positive low (+1) for contributing to SDG 1, 8 and 9 through providing financial services. In the first KPI the score of a bank can increase to positive medium (+2) if more than 25 percent of its loan book is in small and medium enterprises loans. The company employs a min-max rule, which means that no average of the score is taken, but that if a company is negative for one KPI, it receives a negative score per definition. In the second and

third step, the analyst can adjust the score based on how the company produces and whether controversies are known. In fourteen percent of the cases the SDG score of step 1 is adjusted in step 2 and 3, usually downwards. Inputs for these steps are information from RobecoSAM, Sustainalytics, engagement specialists and a the analyst's qualitative assessment of the company's governance framework, track record and policies.

While the SDG scores are used in a different manner, it is valuable for this research to compare the outcome of the SDG scores. At both case study A and B, about 20 to 25 percent of the companies receive a negative tag (see Figure 6.5). These are companies that have a negative impact or contribution to the SDGs. Interestingly, only 20 percent of stocks at case study A receive a positive contribution score, whereas 60 percent of credits receives a positive contribution score at case study B.

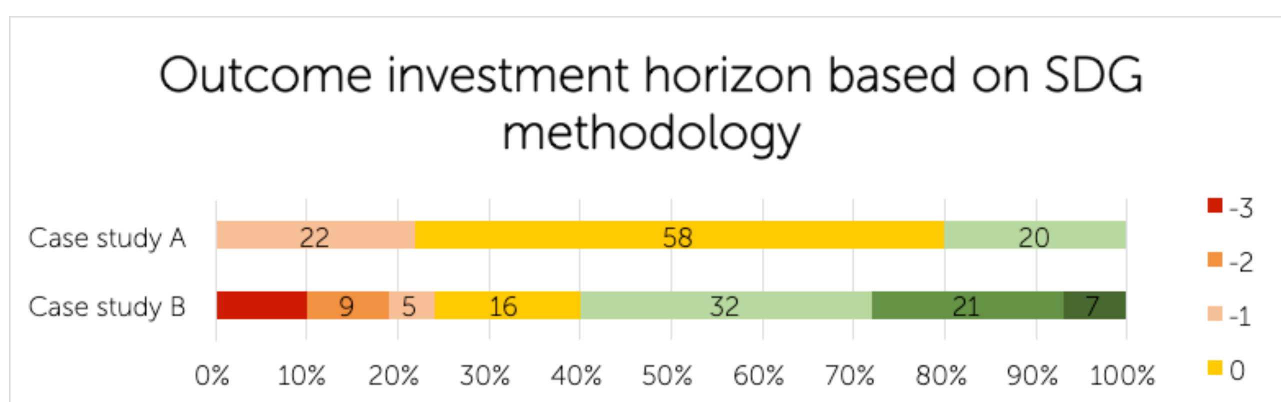


FIGURE 6.5 SCORES OF COMPANIES BASED ON SDG METHODOLOGY

SDGs as qualitative input

In the fundamental analysis, analysts use information based on the SDGs as a qualitative input. At case study B, the SDG score and the description of the KPIs are integrated into the ESG profile, which is part of the fundamental analysis of the firm. An analyst describes:

> *'The sustainability paragraph is divided into a part A with the ESG information and a part B with the SDG step 1, 2 and 3 described. (...) Here you start with step 1 and then you write down per KPI, and then after it the implication for the SDG score. And then in the end you have to describe they sell these products and that's why I did it this way. Here you make a description for step 2. And then there will be a result.'*

At case study A, analysts pick about 300 names for conducting fundamental research, out of the 1,300 stocks which are left after the SDG scoring and financial and quality screening. This bottom-up research results in an impact case, in which the impact and financial quality of the company is assessed and described. The main impact of the company is described through the fundamental drivers of the business model of the firm, the intentionality of the impact and by linking the impact to a few SDGs.

Hence, at both case studies the SDGs are used both as an selection criterion and as qualitative input. However, next to similarities there are also differences in how the SDGs shift attention in investment decisions.

6.2 Differences SDG investing

To answer the second research question, I examine what factors explain the variance in how the SDGs shift attention in investment decisions. The ABV-model describes which factors influence the attention that decisions makers have in investment decisions. When factors differ per firm, the shift of attention is also taking place differently. Three differences between the case studies stand out: different views on the SDGs, different team set-up and the structure of procedures differs (see Table 6.3).

	Case study A	Case study B
View on SDGs	SDGs part of fundamental drivers	SDGs separate from fundamental drivers
	Aim of maximum positive impact	Aim of contribution to SDGs
	General contribution to SDGs	Specific contribution to SDGs
Team set-up	Team specific on sustainable investing	Team on global credit research
Structure of procedures	No separate meetings on SDGs	SDG committee
	Individual portfolio managers take decisions at any point in time	Credit committees take decisions at certain point in time

FIGURE 6.3 DIFFERENCES BETWEEN CASE STUDIES

6.2.1 View on SDGs

The first factor explaining variance in the shift of attention is a difference in how each company views SDGs. This difference relates to whether investors consider the SDGs as a fundamental driver and what the fund aims to achieve with respect to the SDGs.

SDGs as a fundamental driver
At case study A, the SDGs are considered a fundamental driver of firm value, through the ability of a firm for long term value creation. At case study A, the goal of the equity fund is impact investing, which is defined as follows:

> *'Impact investing is an extension of ESG investing, with a focus on offering solutions to make a positive contribution to sustainability goals.'*

As the SDGs are considered to be a description of the future world, the fund focuses on businesses that have a positive impact on the SDGs. As such, the SDGs are considered to be important to the ability of a company to have a successful business model in the (near) future. A portfolio manager states:

> *'Forward looking these companies have less risk because they will profit from the SDGs instead of suffering from it. If a serious carbon tax price will come, then that is positive for us, but negative for the whole energy sector, a large part of the financial sector and so, overall for the index.'*

Hence, the challenge described by analysts at case study A is to find companies that provide solutions to the SDGs and have an attractive financial return. This challenge plays out differently per sector, as the following analysts describe:

> *Energy sector analyst: 'In the end you want to have growth in your return, so you seek for above average return and above average growth potential, that combination. But often that fits well together with the energy transition and the SDGs.'*
>
> *Communication services and enterprise software analyst: 'No bribery, no privacy issues, no state intervention, and then also a strong market shares, satisfied customers, a product which is priced attractive, good returns on capital: that is like finding a needle in a haystack. And then the valuation has to be attractive too.'*

In comparison, at case study B, although the SDGs are integrated into the ESG profile of the company's fundamental analysis, they are considered to be separate from the fundamental drivers of the credit valuation. As such, the SDGs are part of the fundamental analysis, but not integrated into the valuation. A portfolio manager states:

> *'(...) because equity has a lot to do with growth and expectations. While at the bond side we look a lot at what can go wrong. You start with 100 and you can get to 0, but it cannot easily get to 200, the price of a bond. That gives a very different mind-set.'*

The fundamental drivers of corporate fund value are thus considered to be the credit spread and creditworthiness. On this in relation to the SDGs, respondents state:

> *'Sustainable in the sense of the ESG aspects that I mention, we take those into account. It is really the contribution to the SDGs that I wouldn't say it deserves a lower spread because of it. So far, I can't explain that with market dynamics, but maybe in the end a professor stands up who developed a nice model for that, but currently I don't see it. While with sustainability, I think that non-sustainable aspects should be factored in.'*
>
> *'The SDGs don't have to have a direct impact on the credit quality. [Beer company] has a fine credit quality, but well, alcohol doesn't match with the SDGs so we're not going to buy it.'*

SDGs and the fund objective
With regards to the rules of the game the fund objective differs between the case studies. Where at case study B the rule is to seek specific contribution to the SDGs through KPI setting, at case study A the rule is to seek a maximum positive impact. Although at case study A they are experimenting with SDG contribution scores, in the investment decisions the SDGs are integrated in a more generic sense in the impact case.

At case study A, respondents state that positive impact has priority and that the portfolio manager actively seeks this. A respondent states:

> *'In the analysis of the firm it (impact) has to be in fact a nobrainer. It has to be in the mission and strategy. You shouldn't have to think twice about it.'*

In the impact case, the company's impact is generally linked to a small number of SDGs. Also, the overall company's impact is assessed through the 'impact mind map'. As described, the mind map is a thought exercise and is used to challenge the difficulty of estimating impact. In engagement with companies, investors discuss the impact mind map and how the company can improve its impact reporting. A portfolio manager puts it as follows:

> *'The more concrete you try to measure (impact), the more difficult it often becomes. But you certainly have to try it, and it is a super useful exercise. Sometimes you get quite far and sometimes you notice that you don't get far with measuring, well, then you just keep engaging with companies.'*

At case study B, there is a preference in portfolio construction for firms with a higher SDG score, but in the process there is no rule directing more attention towards firms with higher scores. An analyst describes:

> *'Ceteris paribus you also pick the higher, but then the spread has to also be good so there are a lot of factors. In the fund itself we currently don't make a distinction between those, in principle if it is positive and sometimes a zero, then that is OK. Then you have all the latitude to buy, but if our portfolio manager gets a pick between two identical companies with the same fundamentals score and spread, and one has the SDG score of 2 and the other of 1, then he will go for the one that scores 2.'*

For the sector that one of the analysts follows, a KPI in the SDG guidebook is the revenue percentage in emerging markets. He describes:

> *'Yes, I am not actively looking like, this firm is high in emerging markets so I have to have extra of that. I've signalled that and for the SDG funds, we then know that for those funds I have earmarked this company as a real contribution, so we can invest in it.'*

The contribution that these investments have is made specific to the SDGs, as the KPIs are set up on the basis of a few specific SDGs each (see Subsection 4.1.3). A respondent states:

'You know, there are 17 SDGs and 169 sub goals, and one of the sub goals of both SDG 1, 8 and 9 is the provision of financial services. As that is something that banks do, and that is what the United Nations ask, you have to link that positively, so the starting point is positive low. (...) We have KPIs, that finetune that conclusion more specific. For banks we say that SME lending, that the impact from a SDG perspective is larger than a bank who only does corporate lending.'

As described, each sector has a few KPIs that identify a positive or negative contribution to one or more SDGs. Jointly, the sector score and KPIs then determine a specific score that shows the contribution to the SDGs.

6.2.2 Team set-up

The second factor explaining variance in the shift of attention lays in the team set-up. At case study A, the team is set up for executing the sustainable investing strategies. At case study B, the team is responsible for executing all global credit strategies.

In the team at case study A, portfolio managers are either responsible for the sustainable strategies or for the impact strategies. The fundamental view on companies however, is one process. Both the analysts and portfolio managers thus have sustained attention towards sustainable investing issues and answers (Ocasio, 2011). The value chain review meetings are an example of the team's unified process. A portfolio manager explains:

'It is good to sit together on a regular basis and to have that discussion together. It is often a kind of update on the sector about what happened, did something come up in the fundamentals or on the data side. Did the analyst's view change, did the view at the PM side change, are there new ideas and then we also set a research agenda for the coming weeks or months. So everyone can say something, you were there, it's not very formal. You just sit down and sometimes you have better discussions than other moments, but that also depends a bit on where your passion if. One person has more with tech, while the other is more interested in the environmental side.'

At case study B, the credit team is responsible for all credit strategies. There is a clear split in responsibilities between credit analysts and portfolio managers. This is a strategic decision allowing analysts to excel in fundamental credit research and portfolio managers to excel in portfolio construction, the top-down view on the market and risk allocation. Hence, analysts provide the fundamental analysis for all credits strategies, which are used by portfolio managers to construct a portfolio. In the credit committees, decisions are then taken by discussing the F-score and the SDG-score (see Figure 4.4). Analysts fill in the SDG score and KPIs for their companies and submit amendments whenever the KPIs or the company's characteristics changed. In the credit team there are a few persons who have particular responsibility for the SDG strategy: the portfolio manager of the SDG

funds, the credit research co-head and the head of sustainability integration credits.

6.2.3 Procedures in investment process

The third factor explaining variance in the shift of attention is the difference in procedures in the investment process. At case study B, the procedures are more structured and there is a clear governance on the responsibility and procedures of the SDG strategy. On a daily basis credit committees for investment decisions take place and the SDG committee is responsible for the SDG guidebook rules and KPIs. At case study A, the strategy is executed by the team and there are no particular meetings on the SDGs or on investment decisions.

At case study B, the discussions on the KPIs and the SDG guidebook take place in a SDG committee, consisting of people from different departments. Analysts can provide input for the SDG Committee, as they in their fundamental research form an opinion on suitable KPIs to evaluate positive or negative SDG impact per sector. In discussing a particular SDG, the SDG committee goes back to the underlying sub goals and assesses what the impact of a company on these is.

> *'We have a SDG committee because the framework is owned by [name company], so those are the same scores and the same methodology as at equities. Important is that the guidebook is not static. Look, those five percent electric vehicles is not very ambitious, but at the moment most companies are I believe at only three percent. You can say that it has to be fifty, but these things also takes some time so you have to facilitate that. But it could well be that in two years' time you are able to raise the bar and determine a higher threshold. Well, those things have to go through the SDG committee.'*

Furthermore, at case study B a clear governance structure is set up in the SDG investing process, to ensure the fund's credibility.

> *'What we also worked on is that governance that we put down clearly. Who determines what? How is the score set up, who determines the end score and how is that then used in the investment process. (Through this, you can) show your client what you do. And that what you say you do, is also what you do.'*

For analysts, attention shifts to the SDGs whenever they fill in or adjust the SDG score and KPIs. Usually, this is when an analyst updates a company profile for a credit committee, when company characteristics change or when an analyst updates all SDG scores. Hence, the SDG scoring asks for attention on certain moments rather than continuously. A respondent states:

> *'So if the credit analysis is updated, and that is for some firms once a year and for others twice a year, depending on whether something changed, what the credit quality is, so at the usual credit updates the SDG score is also updated, as part of the usual updating process.'*

At case study A, there are less formal procedures in the SDG strategy. The impact case and fundamental analysis are most important, and analysts and portfolio managers discuss these in informal settings. The rule practiced is that a company has to make a significant positive contribution to one or more SDGs. The SDG tagging score is determined beforehand and plays a minor role in the fundamental research. A respondent states on the SDG tagging:

> *'Well, it's not that we do that certain times a year. In fact when someone sees a firm, or when we discuss it. In particular (name) and (name) did that work, and it's not that old, so for that matter, it's still quite up to date.'*

The use of SDGs as qualitative input consists of indicating what SDGs a company has the most impact on.

There are however no formal procedures or meetings around the SDGs.

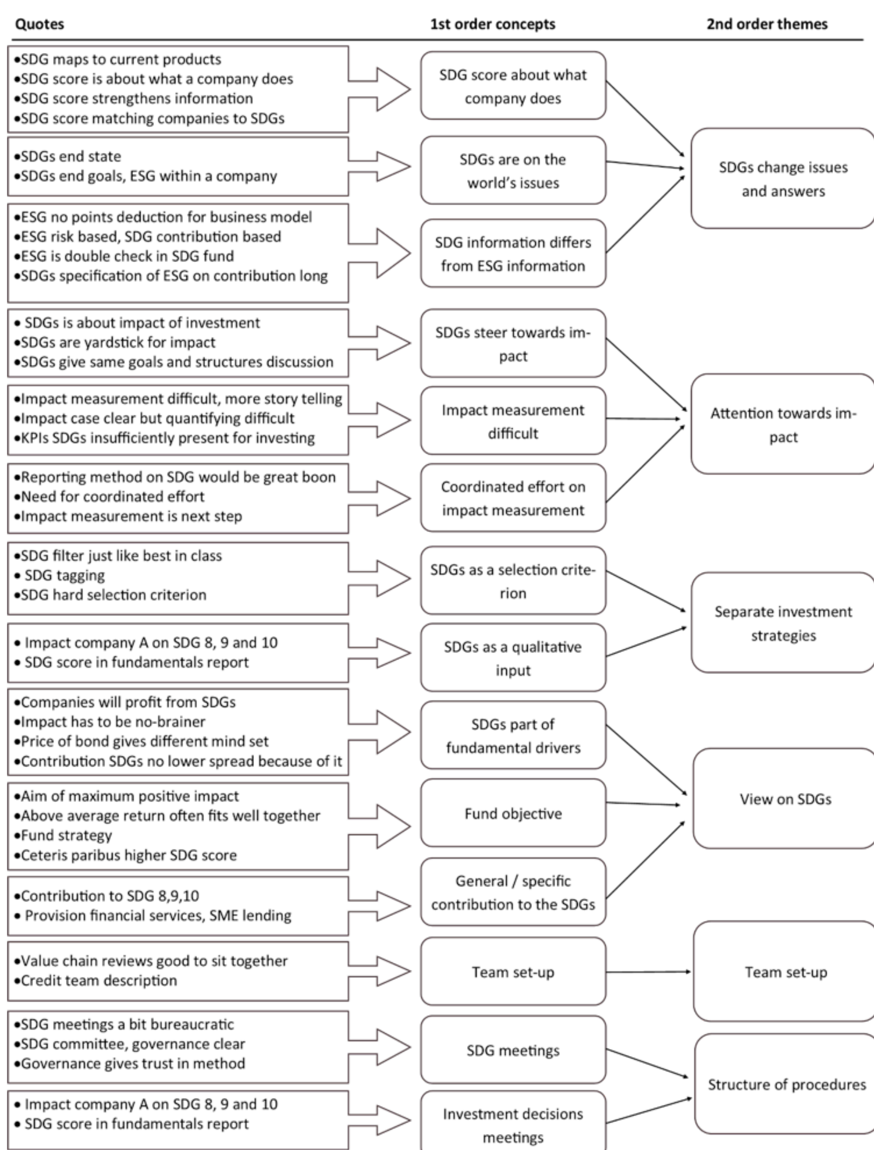


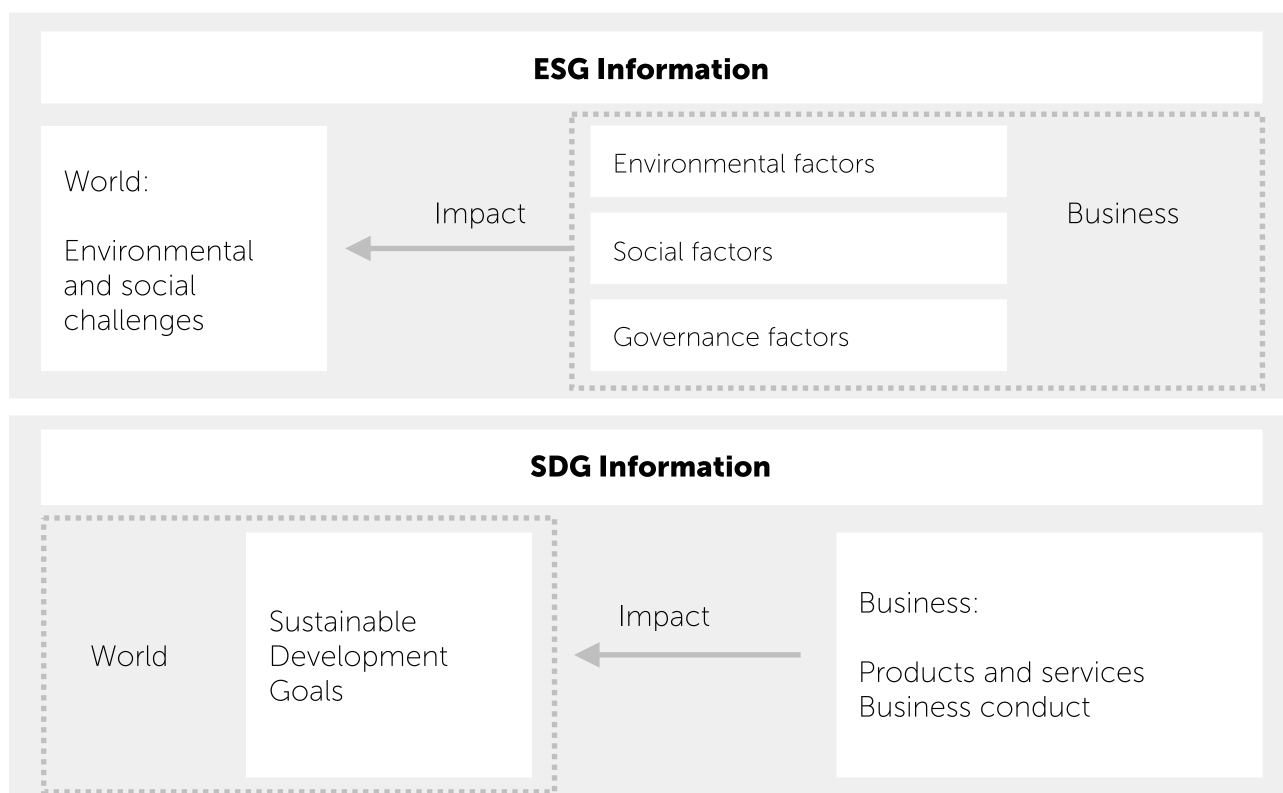
TABLE 6.4 DATA STRUCTURE

7 Discussion

In this research, I applied the attention-based view model of Ocasio (1997) to examine in what way attention shifts when integrating the SDGs in investment decisions. Despite the importance given to SDG investing in the public debate, there is little empirical research on these practices. In this chapter, I draw broader implications and provide suggestions for further research.

7.1 Implications

This research has three broader theoretical implications. First, this research provides first empirical insights into SDG investing. The second relates to the degree in which the SDGs can be considered as fundamental drivers. The third relates to what the evidence of this research implies for the future of SDG investing. First, this research gives insight into a new phenomenon: SDG investing. So far, SDG information is considered to be similar or building on ESG information. The evidence in this research shows that SDG information is fundamentally different from ESG information. While the ESG factors affect the world's environmental and social challenges, the SDGs direct attention towards products and services that contribute to the SDGs (see Figure 7.1).



Where ESG information has developed over time, information on how a business contributes to the SDGs is in its first stages. As such, the SDGs are a normative framework on where the world should move towards to, rather than a company. Although this asks more translation as to what business indicators impact what SDGs, it makes the societal and environmental impact more explicit.

Second, the respondents in this research viewed the SDGs differently with regards to its use in their fundamental research. Most of the respondents made a clear differentiation between equity and bond investing with regards to the impact of the SDGs. As Merton (1976) showed in his research, any asset valuation shock impacts both the value of equity and bonds. Therefore, if an investor believes the SDGs impact the long term viability of a business model, this automatically implies that the SDGs also affect equity ánd bond values. A more consistent application of sustainability information at different asset categories improves investment practices. Integrating the SDGs into fundamental analysis is important, as this gives sustained attention to the SDGs, rather than creating a separate process which only asks attention when constituents change (Ocasio, 2011).

The third implication relates to what the evidence of this research implies for the future of SDG investing. Currently, many initiatives and methodologies are being developed in this field. The indicators that are currently or potentially available on business level – on products and services and the business conduct of a company – need translation into impact measurement on the SDGs. As investors only have information on firm level, they develop this translation through KPIs per sector or through an impact measurement approach. As decision makers have limited attention, it is important that they are provided with relevant issues, answers and resources. Development in this field should consider the issues that have been raised on ESG ratings, to avoid making the same mistakes. These issues relate to the lack of standardization, credibility and use of ESG ratings (Chatterji et al., 2014; Consolandi et al., 2018; Dorfaleitner et al., 2016; Khan et al., 2016; Kotsantonis et al., 2016; Semenova & Hassel, 2015; Windolph, 2011). Despite the common language that the SDGs provide, they are also broadly formulated, have partly conflicting goals and are only formulated with the horizon until 2030. Societal and environmental challenges are inherently a moving target, and developing ratings on these always leads to backward looking information, rather than forward looking information. Therefore, this research shows that rather than developing 'SDG ratings' or comparable concepts, relevant impact measurement on a business' products and services and business conduct gives decision making more fact-based information. This impact measurement information on business factors enhances resource building well beyond 2030 and can increase the matureness of sustainability information. As attention in investment decisions is limited, investors can focus on interpreting the actual information and forming relevant rules of the game for decision making that are suitable for the long term.

7.2 Further research

This research was focused on investment decisions in the investment teams of

two Dutch asset managers. Important determinants of the SDG strategy such as organisational factors and the environment of decision were thus outside of this research scope. The interaction between individual, department based and organisational-level attention could therefore be subject of further research (Ocasio, 2011). As part of the environment, it can be interesting to further examine the interaction between clients and portfolio managers, and the influence of both on the SDG investing practices. Further research should also be done into SDG investing in different asset classes – private equity, private debt – and at different organizations – for example, pension funds and non-commercial asset managers.

7.3 Conclusion

Despite the importance given to SDG investing in the public debate, so far there is limited empirical research in this field. This study provides insights in how investors' attention is shifted when the SDGs are integrated into investment decisions. I applied the attention based view of the firm (Ocasio, 1997) to investment decisions made by decision makers who execute an SDG equity strategy (case study A) and an SDG credit strategy (case study B).

One of the main findings is that the SDGs shift attention to the world's social and environmental challenges, and as such, steer attention towards impact. At both case studies the SDGs are used as a selection criterion and integrated in a qualitative manner in the fundamental analysis. Differences between the case studies relate to the fund objective and structure. At case study A, the aim is to have a maximum positive impact, formulated as a general contribution to certain SDGs. The ability of a firm to contribute to the SDGs is seen as a fundamental driver of firm value. At case study B, the SDGs are seen separate from the fundamental drivers of corporate bond value. The fund aims to contribute to the SDGs, which is specified through KPIs per sector. With regards to the structure of the fund, at case study A the team is specific on sustainable investing and there are not separate meetings on the SDGs. At case study B, the team executes all credit funds and decisions are taken in SDG and credit committees.

The empirical evidence that the SDGs provide different information than ESG information is a contribution to the emerging literature on SDG investing. This study furthermore discusses the development of SDG investing in light of the limited attention that investors have. Developing specific 'SDG ratings' might take long to develop and in the end provide investors with information that has the same issues as ESG ratings. Therefore, focussing attention to development of sustainability metrics that provide factual business information might increase matureness of sustainability information in the long run.

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9 Appendix

Dimension 1: Shift in attention

1. SDGs change issues and answers

A. The SDGs are about what a company does

A1 'We start with step one, which focuses at the products, so to what extent does the company contribute to the SDGs with the products that it makes and services it delivers. And then you already feel that a company, for example a grid operator contributes positively to the SDGs, since Clean Energy is one of the SDGs. A water utility company providing drinking water to us or in an emerging country, that of course positively contributes to the SDGs. However, if you are a company active in gambling, alcohol, tobacco or shale gas, then you have a negative contribution. Those are quite intuitive and logical things.'

A2 'So that is also difficult to say because in the SDG profile you also write on what a company does. For example, coming back to (company name), they make hospital equipment and with the idea that in emerging markets there will come a lot more access to healthcare in the coming years, that will be a growth drives in their sales.'

B. The SDGs are on the world's issues

B1 'The SDGs are not something that is, but rather an end state, on how to achieve something. To achieve something you need money, for which there is an explicit role for the financial industry.'

B2 'Those SDGs are really the end goals saying, what resources do we need in order to achieve the SDGs.' (...) While ESG like within a company, that's of course something that you decide for yourself yes or no.'

C.SDG information differs from ESG information

C1 'Between ESG and SDG, there doesn't have to be any kind of connection, since you measure something complete different. (...) With a ESG score, you don't do a normative judgement on whether the product the company produces is good or bad. You don't get bonus points if you by chance produce good products and neither points deduction if you produce oil, that not where the ESG score is about.'

C2 'With ESG before we would (...) look at ESG risks, and suppose one is in emerging markets and the other not, then in the old methodology we would've said both, this is not a lot of risk from an ESG perspective. And now you say reasoning from the SDGs, we think one of the two is better because it has a better contribution to No Poverty, to Economic Growth and to Innovation and therefore, we prefer this one. That has to do with the first KPI that we have, because we have another, and in this way you can at least make a distinction.'

C3 'You use the ESG information, you look at it as a kind of double check. You think, OK, I think this is a very good clean company. And then you check Sustainalytics or MSCI ESG and often that confirms your view. If it does not on a few aspects, then you check these.'

2. Attention towards impact

A. SDGs steer towards impact

A1 I think its the next step, right, the next step to ESG integration. Because it relates more to the impact that your create. It is one step further because ESG integration is more about how can you make best informed decisions for your investments, whereas the SDGs are not necessarily into the financial materiality, but it is more how does the investment have an impact beyond purely your investments.

A2 The SDGs are 'more a yardstick, a measure and we have to use our impact criteria to see if the impact is real.'

B. Impact measurement difficult

B1 One challenge we've encountered stems from the wide array of ESG approaches and requirements, given the global landscape and the sheer diversity of data. There's no standard for reporting on SDGs, for example, so it's difficult to measure the contribution of one particular impact project.

B2 'You see that back in the fact that you would like to show externally that you contribute, that you have impact, and that is very difficult because there are no standards. You can easily calculate your financial return and maybe something like your carbon footprint of something similar, but you cannot show how large your impact return is.'

C.Coordinated effort on impact measurement

C1 'We believe that a more innovative reporting methodology, with a focus on measuring progress on the SDGs, would be a great boon to the impact investing world. In the coming years, we think the establishment of a European taxonomy is likely, which would create common ground for assessing the current situation and future progress.'

C2 'We were one of the first to launch an SDG Equities product and after that, we were the first to develop a model that allowed us to apply it to credits, too. That's great, but ultimately, the SDGs will only have a really significant impact once the EU develops a solid framework and we have generally accepted definitions. Only then will we be able to really measure sustainability and see the impact on the SDGs. So yes, we can play a part in this, every asset manager can make a contribution. But ultimately, there needs to be a coordinated effort, driven by EU regulations, that allows the government to draw on the expertise of industries such as ours.'

C3 'The concept has to be an impact concept, you have to be able to explain it to your clients easily and the measuring might come later then. I think that with ESG Screen17, with the SDGs, that we can take a step, but of course it's quite hard to measure impact.'

3. Separate investment strategies

A. SDGs as a selection criterion

A1 'How that works in practice: we went through the database of companies and we put at every company: positive impact yes/no and negative impact yes/no. And then per SDG positive yes/no and per SDG negative yes/no, so you have 2 times 17 plus 2 columns so 36 columns. So that's a way to select it.'

A2 'While at SDGs, that's a more hard selection criterion you could say. If there is a negative contribution score, then we don't buy anymore. Even if the spread is very attractive.'

B. SDGs as a qualitative input

B1 (At a certain impact case) 'Well, you have these three SDGs. 8, 9 and 10. 8 is economic growth, you're enabling companies to do their finances independently, spend less time to administration et cetera, so that accelerates growth. Innovation is mostly the digitalization part, since a lot is currently done by hand, saving all receipts. If you have everything real time digital then you can also pay electronical which decreases your payment time. (...)'

B2 'The sustainability paragraph is divided into a part A with the ESG information and a part B with the SDG step 1, 2 and 3 described. (...) Here you start with step 1 and then you write down per KPI, and then after it the implication for the SDG score. And then in the end you have to describe they sell these products and that's why I did it this way. Here you make a description for step 2. And then there will be a result.'

Dimension 2: Variance in shift in attention

NN IP

1. View on SDGs

A. SDGs part of fundamental drivers

A1 'Forward looking these companies have less risk because they will profit from the SDGs instead of suffering from it. If a serious carbon tax price will come, then that is positive for us, but negative for the whole energy sector, a large part of the financial sector and so, overall for the index.'

A2 'In the analysis of the firm it (impact) has to be in fact a nobrainer. It has to be in the mission and strategy. You shouldn't have to think twice about it.'

B. Aim of maximum positive impact

B1 'Impact investing is an extension of ESG investing, with a focus on offering solutions to make a positive contribution to sustainability goals.'

B2 Analyst of energy sector: 'In the end you want to have growth in your return, so you seek for above average return and above average growth potential, that combination. But often that fits well together with the energy transition and the SDGs.'

B3: Analyst of communication services and enterprise software: 'No bribery, no privacy issues, no state intervention, and then also a strong market shares, satisfied customers, a product which is priced attractive, good returns on capital: that is like finding a needle in a haystack. And then the valuation has to be attractive too.'

C. General contribution to SDGs

C1 (At a certain impact case) 'Well, you have these three SDGs. 8, 9 and 10. 8 is economic growth, you're enabling companies to do their finances independently, spend less time to administration et cetera, so that accelerates growth. Innovation is mostly the digitalization part, since a lot is currently done by hand, saving all receipts. If you have everything real time digital then you can also pay electronical which decreases your payment time. (...)'

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D. SDGs separate from fundamental drivers

D1 '(...) because equity has a lot to do with growth and expectations. While at the bond side we look a lot at what can go wrong. You start with 100 and you can get to 0, but it cannot easily get to 200, the price of a bond. That gives a very different mind-set.'

D2 'Sustainable in the sense of the ESG aspects that I mention, we take those into account. It is really the contribution to the SDGs that I wouldn't say it deserves a lower spread because of it. So far, I can't explain that with market dynamics, but maybe in the end a professor stands up who developed a nice model for that, but currently I don't see it. While with sustainability, I think that non-sustainable aspects should be factored in.'

D3 'The SDGs don't have to have a direct impact on the credit quality. [Beer company] has a fine credit quality, but well, alcohol doesn't match with the SDGs so we're not going to buy it.'

E. Aim of contribution to SDGs

E1 'The fund only invests in companies that contribute to the SDGs. The investment philosophy is based on managing a well-diversified portfolio with a long term vision. Companies that don't contribute to the SDGs of the United Nations are being excluded from the investment universe. The top down beta positioning is based on the outcome of the Credit Quarterly Outlook, in which the current credits environment is defined and discussed in which phase of the credit cycle we are currently in.'

E2 'Ceteris paribus you also pick the higher, but then the spread has to also be good so there are a lot of factors. In the fund itself we currently don't make a distinction between those, in principle if it is positive and sometimes a zero, then that is OK. Then you have all the latitude to buy, but if our portfolio manager gets a pick between two identical companies with the same fundamentals score and spread, and one has the SDG score of 2 and the other of 1, then he will go for the one that scores 2.'

F. Specific contribution to SDGs

F1 'You know, there are 17 SDGs and 169 sub goals, and one of the subgoals of both SDG 1, 8 and 9 is the provision of financial services. As that is something that banks do, and that is what the United Nations ask, you have to link that positively, so the starting point is positive low. (...) We have KPIs, that finetune that conclusion more specific. For banks we say that SME lending, that the impact from a SDG perspective is larger than a bank who only does corporate lending.'

2. Team set-up

A. Team specific on sustainable investing

A1 'It is good to sit together on a regular basis and to have that discussion together. It is often a kind of update on the sector about what happened, did something come up in the fundamentals or on the data side. Did the analyst's view change, did the view at the PM side change, are there new ideas and then we also set a research agenda for the coming weeks or months. So everyone can say something, you were there, it's not very formal. You just sit down and sometimes you have better discussions than other moments, but that also depends a bit on where your passion if. One person has more with tech, while the other is more interested in the environmental side.'

B. Team on global credit research

B1 'So we have a whole team, the total credit team that is, over 30 people. We have a lot of seniors in the team who are active in the market for many years. We have ten portfolio managers, 23 what we call career analysts, quantitative researchers and traders.'

3. Structure of procedures

A. No separate meetings on SDGs

A1 'We don't have a separate committee for the SDGs. To be honest, that sounds a bit bureaucratic to me. Then we'll talk about it and then some ideas will emerge, whereas I just think we should go do it.'

B. Individual portfolio managers take decisions at any point in time

B1 'It can work two ways, either I come with an idea from the companies that I follow, with a company that I think fits the strategy, is economically attractive and has an attractive valuation so that it can be included in the fund. But it can also be that a portfolio manager comes across a company on a conference, or that they hear from someone else, and that he says: isn't that something interesting? And that I look into it and then it goes like that. It is mostly the decision of the portfolio managers, but it can be that we as analysts say: I think that this position did well, shouldn't we decrease it or the other way around, is this not the time to change the position. This part is mostly the decision of portfolio managers.'

C. SDG committee

C1 'We have a SDG committee because the framework is owned by RobecoSAM, so those are the same scores and the same methodology as at equities. Important is that the guidebook is not static. Look, those five percent electric vehicles is not very ambitious, but at the moment most companies are I believe at only three percent. You can say that it has to be fifty, but these things also takes some time so you have to facilitate that. But it could well be that in two years' time you are able to raise the bar and determine a higher threshold. Well, those things have to go through the SDG committee.'

C2 'What we also worked on is that governance that we put down clearly. Who determines what? How is the score set up, who determines the end score and how is that then used in the investment process. (Through this, you can) show your client what you do. And that what you say you do, is also what you do.'

C3 RobecoSAM 'decides what is a plus and what is a minus. I always call them our sustainable conscience because financial specialists of course love the companies that they invest in while RobecoSAM has a different viewpoint, they look more from a sustainability point of view.'

D. Credit committees take decisions at certain point in time

D1 'The analysis is based on fundamental, technical and valuation perspective. The bottom up research is executed by our credit analysists, which execute the fundamental analysis. The research reports of the analysts are being discussed in about 500 credit committees per year. The portfolio managers are responsible for the portfolio construction.'

D2 'Every day there are credit committees. If you as an analyst analysed a company, so when finishing the report, you call the portfolio managers and another analyst and then you start discussing. So the portfolio managers and analysts are very much aligned with each other. They discuss, and maybe you don't agree but that is a moment that you sit together and discuss.'