

HOW TO CONSTRUCT AN ACCOUNT OF SUSTAINABILITY PERFORMANCE

THE POWER AND DANGER OF CALCULATION

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How to construct an account of sustainability performance: The power and danger of calculation

Abstract:

This study responds to the call for further research about how other organisations, corporations more specifically, achieve calculability and account for sustainable development, from Sobkowiak et al. (2020). By drawing upon a multiple case study of three companies, this paper seeks to explain how corporations become capable of constructing an account of their sustainability performance. The study provides an analysis through the lens of Callon & Law's (2005) *Three stages of calculation* to find how the case companies frame calculable spaces. This paper contributes to Sobkowiak et al. (2020) by finding that i) there are differences in how to construct an account of sustainability performance depending on type of organisation, type of industry, and what type of SDG that is in focus, finding that users' perception of the results can affect ability to contribute to a sustainable development, confirming the need for a user dimension in how to construct an account in the context of corporations, and ii) that not only globally but also locally defined indicators can be problematic in the context of corporations, contributing to Sobkowiak et al.'s (2020) problematisation of globally set indicators when creating an account for sustainability performance. In addition, this study supports previous literature (Bebbington & Larrinaga, 2014; Callon, 1998; Cederberg, 2019; Eccles & Serafeim, 2013; Sobkowiak et al., 2020; Solomon, Jill Frances & Solomon, 2006) that sustainability reporting experiences a tough challenge in finding a stable common frame. As such, this study finds that sustainability reporting constitutes a "hot situation" (Callon, 1998).

Keywords:

Calculability, Sustainability reporting, Sustainable development, Indicators, Framing

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1. Introduction

It is desirable to quantify things. As soon as you quantify sustainability performance, companies will want to compare the figures with last year's, to previous periods, striving to improve them. Quantification enhance improvement. When it is possible to quantify, we are very much in favour for it, but it is not possible [to quantify] in all dimensions. We quantify if we can, we strive for that. (Investor 6)

This quote illustrates the evolving relationship between sustainability, accounting and quantification. Sustainability is aimed at addressing environmental and socioeconomic issues for current and future generations (Cassen, 1987). An increasing number of companies¹ have, during the last three decades, engaged in reporting their sustainability efforts (KPMG, 2020). Sustainability has become considered as a precondition for conducting business, as corporations¹ have been indicted as responsible for major negative impacts on the environment (Lozano, 2020). This has made corporations a key focus of the attention in the sustainability debate. In response, sustainability reporting has become an increasingly important part of companies' contribution to sustainable development. (Lozano, 2020) However, sustainability reporting is considered to have conceptual and practical flaws (Walter, 2020). As a result of lacking reporting standards, the sustainability reports are considered to lack comparability, timeliness, reliability as well as quantifiability, all key characteristics considered to make sustainability information useful in decision-making processes (Amel-Zadeh & Serafeim, 2018; Kotsantonis & Serafeim, 2019; Walter, 2020).

This research agenda rests upon a basic understanding that accounting frames calculable spaces, which enable possibilities for thought and action (Callon, 1998; Miller, 2001). Unerman et al. (2018) express the urge to achieve results within sustainability development and emphasise that a key challenge with sustainability reporting is how to quantify and create an account of sustainability performance. Unerman et al. (2018) further affirm that the fastest way for improvements is to include sustainability information in financial reporting, which likely will happen as a result of regulations and social pressure (Unerman et al., 2018). In June 2020, the first draft of a new sustainability regulation in the European Union, namely the EU Taxonomy, was published. The EU Taxonomy is a unified classification system for sustainable activities at the core of the EU action plan on financing sustainable growth, expected to enter into force on 31 December 2021. This regulation defines the minimum criteria that economic activities should comply with in order to be considered environmentally friendly (Breyer et al., 2020). As such, companies will for the first time be forced to link financial and non-financial information through a common definition of sustainable activities.

¹ The notions "companies" and "corporations" are used interchangeably throughout this paper.

Previous research on how to construct an account for sustainability performance, Sobkowiak et al. (2020) more specifically, sought to explain how a national government becomes capable of constructing an account of its biodiversity performance. An account aimed to enable thought and action in pursuit of SDG² 15: Life on Land. They found that achievement of calculability is temporary, and that the performance indicators are subject to continuous evaluation and improvement, influenced by input from sustainability experts, political actors, universities, NGOs and others. (Sobkowiak et al., 2020) Moreover, Sobkowiak et al. (2020) argue that governments as well as other organisations, such as corporations, will need to develop internal infrastructure composed of different departments with complementary capabilities, a so-called socio-technical arrangement, to reach calculability. Sobkowiak et al. (2020) further argue that their analysis, of how to achieve calculability and account for sustainability development, is potentially valuable for corporations who aim to contribute to a sustainable development.

Thus, the aim of this study is to examine the usefulness of Sobkowiak et al.'s (2020) proposed approach to construct an account of sustainability performance, in the context of corporations, covering several SDGs rather than SDG 15 exclusively. Against this background, we aim to answer the following research question:

How do companies become capable of constructing an account of their sustainability performance?

The analysis will be made through a case study of three public Nordic real estate companies, all of which have undergone a Sustainability assessment process. A Sustainability assessment is a specific third-party evaluation of a company's sustainability performance and a statement about the company's expected EU Taxonomy alignment. Due to the high focus of environmental sustainability in the Sustainability assessment and EU Taxonomy, this study will also be more weighted towards environmental sustainability. Furthermore, Sobkowiak et al. (2020) suggest that a user perspective is important to consider in the calculation of sustainability from a company perspective. As such, a total of 19 interviews have been held and analysed, of which 12 with potential users of the Sustainability assessment. These twelve potential users considered either institutional investors, credit research analysts, equity research analysts, or ESG research analysts. To answer the research question, the study provides an analysis through the lens of Callon & Law's (2005) *Three stages of calculation*. Callon & Law (2005) argue it is necessary to consider the three stages in order to be able to frame a calculable space, which in turn is required for the organisation to internalise externalities such as sustainability.

² The United Nations' 17 Sustainable Development Goals (SDG:s) aim to function as a blueprint to achieve a more sustainable future. The goals address global challenges, such as climate change, biodiversity, poverty and inequality. (United Nations, n.d.)

The authors contribute to previous literature in several aspects. First, this study finds that there are differences in how to construct an account of sustainability performance, depending on the type of organisation, type of industry and what type of SDG that is in focus. The study thus contributes with findings from the context of corporations to Sobkowiak et al.'s (2020) study. For example, external feedback through a user perspective seems to be more important from a corporation perspective (versus government) in order to reach calculability. Thus, this study finds that users' perception of the results can affect ability to contribute to a sustainable development, and instead imply risk for counterproductive actions. This finding confirms Sobkowiak et al.'s (2020) proposed need for a user dimension when constructing an account for sustainability performance in the context of corporations. Second, this study contributes to Sobkowiak et al.'s (2020) problematisation of globally set indicators for global goals when constructing an account for sustainability performance, by finding that not only globally set but also locally defined indicators and thresholds can be problematic, at least in the context of corporations. This finding presents the complexity of determining common sustainability regulations and ambitions across countries. Third, this study's findings support previous literature (Bebbington & Larrinaga, 2014; Callon, 1998; Cederberg, 2019; Eccles & Serafeim, 2013; Sobkowiak et al., 2020; Solomon & Solomon, 2006) that sustainability experience a tough challenge in finding a common stable frame, and that the situation is expected to become more cohesive over time as knowledge increases. As such, this study finds that sustainability reporting constitutes a "hot situation" (Callon, 1998).

2. Literature review

This section begins by introducing sustainability reporting and ESG ratings (2.1), why information about sustainability is disclosed and how it is presented, to provide an overall perspective. Second, problems with sustainability reporting and ESG ratings are discussed (2.2). Third, we explain how equity research analysts and institutional investors make use of sustainability reporting (2.3). Lastly, we introduce calculation of sustainability performance which sets the scene for the research question and theoretical framework of this report (2.4).

2.1. Sustainability reporting and ESG ratings

2.1.1. Sustainability – an increasingly prioritised area

An increasing number of companies have, during the last three decades, engaged in reporting their sustainability efforts (KPMG, 2020). Sustainability has become considered as a precondition for conducting business, as corporations have been indicted as responsible for major negative impacts on the environment (Lozano, 2020). This has made corporations a key focus of the attention in the sustainability debate. In response, sustainability reporting has become an increasingly important part of companies' contribution to sustainable development (Lozano, 2020). The KPMG survey of sustainability reporting 2020 (KPMG, 2020) showed an increase in reporting rate from 35% of the largest 250 global companies in 1999 to 96% in 2020. The survey also found that 80% of N100 companies (N100 refers to a worldwide sample of 5,200 companies comprising the top 100 companies by revenue in 52 countries) now report on sustainability, from 24% in 1999 (KPMG, 2020). In general, European companies have been at the forefront of sustainability reporting (Lozano, 2013).

Sustainability reporting has mainly been a voluntary activity, with exception for various European countries (who have introduced sustainability reporting requirements for companies above certain thresholds, such as revenue), with the following purposes: i) to assess the current state of an organisation's progress towards sustainability, and ii) to communicate efforts and progress in the economic, environmental and social dimensions to stakeholders, iv) to benchmark against other companies, v) to demonstrate how the organisations influence, and is influenced by, expectations about the sustainable development (Daub, 2007; Lozano et al., 2016; Schaltegger & Wagner, 2006), and vi) as a base for planning changes for sustainability (Adams & McNicholas, 2007; Lozano, 2013).

However, sustainability reporting is to become mandatory for a large number of companies in Europe in the beginning of 2022, to be included in the 2021 annual report, following the expected release of the EU Taxonomy regulation and an extension of the

EU Non-Financial Reporting directive (PWC, 2021). The EU Taxonomy is a regulatory classification system under which companies define which of their economic activities are environmentally sustainable. The regulation mandates certain companies to report on and disclose the extent to which their business activities are aligned with the EU Taxonomy's definition of sustainable (Breyer et al., 2020). Notably, the EU Taxonomy will provide definitions to companies, investors and policymakers on which economic activities can be considered environmentally sustainable (PWC, 2021). The European Commission describes the EU Taxonomy as *“a tool to help investors, companies, issuers and project promoters navigate the transition to a low-carbon, resilient and resource-efficient economy”* (European Commission, 2020).

More specifically, the EU Taxonomy aims to make it possible to define environmental performance of several economic activities across a range of industries, and states requirements corporate activities must meet to be considered sustainable from an environmental perspective (PWC, 2021).

2.1.2. Sustainability reporting standards

Several voluntary standards and guidelines have been developed to help managers to report the myriad of sustainability issues (Lozano et al., 2016). Parameters such as company size, industry and perceived corporate impact (economic, environmental and social) play an important role whether a company decide to publish sustainability reports (Alonso-Almeida et al., 2014). In the companies that have been publishing sustainability reports, the report has often been developed by a single department, which results in a compartmentalised sustainability reporting process, leading to that sustainability performance is prevented to become a natural part of strategy and daily operations (Lozano et al., 2016; Schaltegger & Wagner, 2006). Sustainability reporting presents a number of challenges for both companies, users and legislators, such as gaining an understanding, knowledge and experience of sustainability (Adams & McNicholas, 2007). For example, the challenge to provide resources to gather data and engage stakeholders, and the need to keep a balance between the details and core information (Lozano, 2006).

Several tools, initiatives and approaches (“TIAs”) for sustainability reporting have been developed to engage and promote sustainability within corporations. Developed TIAs have advantages with respect to specific sustainability dimensions to specific company's organisations, but the TIAs have certain disadvantages when it comes to dealing with the complexity and broadness of sustainability. As such, relying on one TIA can result in counterproductive actions, and thus, a limited and narrow contribution to the sustainability development, whilst the use of too many TIAs leads to duplication in tasks and therefore wastes resources and energy. (Lozano, 2020) Many times, the TIA and its implications for the company have been poorly linked to each other, leading to company

leaders and decision makers being increasingly confused about how the two could fit together or how they should be used (Ny, 2009).

2.1.1. ESG ratings as a specific form of sustainability reporting

Today's sustainability movement reflects a large number of TIAs aimed at remediating harm to the nature, improving social justice, and reconfiguring processes of governance in both the public and private sectors. However, they also have conceptual and practical flaws, especially for those looking for user-friendly calibrations and metrics without thinking about their implications that much. (Walter, 2020) As a sign of the institutionalisation of ESG data, more than 120 rating agencies provided ESG data as of 2016, including large data vendors such as Bloomberg and Thomson Reuters, with the purpose to identify and gauge the importance of desirable states of the world with respect to the natural environment, governance practices and social conditions (Amel-Zadeh & Serafeim, 2018). These ratings are further developed to create a set of benchmarks against which the conduct of companies, and investors, can be gauged. However, the transparency among the indicators, parameters, or how qualitative assessment are applied to create the specific ratings, are very limited. (Malik, 2015; Walter, 2020) Further, Walter (2020) stress the importance of transparency when building the ESG ratings with regards to i) data sources and identification, ii) quantification, iii) calibration, iv) weighting, and v) aggregation, in order to enable the ability to replicate, as replication is an attribute that dominate defensible social science research. Also, to be remembered, is that the notion of sustainability can change over time, as well as be varied geographically. (Walter, 2020)

The use of a consistent methodology is key when building the ESG scores. Due to the investor-pays model, the result from a ESG rating is mostly proprietary and not in the public domain, and, as such, are methodologies and indicators opaque which further fuels the lack of standardised ESG rating criteria. The inconsistency is further reflected in the low correlation between different ESG rating agencies. (Walter, 2020) The main issues stems from that most of the ESG rating agencies use self-reported data to construct their metrics and that there are no generally accepted guidelines as to how to compile, normalise, weight, and process ESG data (Walter, 2020). This lack of standardisation is responsible for the variation between ESG scores across different rating agencies (Huber & Comstock, 2017). However, Walter (2020) and Malik (2015) emphasised that achieving high ESG scores may reflect better performance and lower risk, stronger reputation, and more. Notwithstanding, a high rating may also impose reputational risk, if the rating will drastically change (Walter, 2020).

Further, previous literature (Amel-Zadeh & Serafeim, 2018; Kotsantonis & Serafeim, 2019) highlight four limitations to ESG information that limit companies' and investors' ability to use the information as well as potentially fuel the divergence across rating agencies: i) different firms have different non-comparable metrics attributed to the same

issue, ii) since scores are computed in relation to other firms in a given peer group, a firm's score will depend on the performance of the peer group, and iii) there are wide differences in methodologies to incorporate missing data, and iv) lack of quantifiable ESG information. Moreover, the more data are disclosed, the greater tends to be the variation across ESG ratings (Christensen et al., 2019).

2.1.2. Sustainability and its implications on a company level

Malik (2015) examines how corporate social responsibility affects firm value and concludes that social and environmental activities significantly enhance firm value for public firms through capital market benefits, strengthened reputation, improved operating efficiency, new potential products as well as stronger relationships with various stakeholders. The potential to enhance shareholder and stakeholder value increases with improved social and environmental performance which can be achieved when social and corporate goals are aligned and is used as a strategic tool (Malik, 2015). However, Gray (2006) argues that social, environmental and sustainability reporting has (or will normally have) a quite different, even antagonistic, relationship with normal assumptions of corporations as value creating entities. Moreover, Malik (2015), Gray (2006) and Ferrell et al. (2016) argue that companies with more social and environmental activities tend to have a higher quality of their reporting and governance. Yet, Buritt & Schaltegger (2010) found that in case of information asymmetry between providers and users, companies will take advantage of the situation and provide a lower quality of the report, if the user is unable to evaluate the quality. Malik (2015) concludes that there are still several definitions, approaches and diverse conclusions with regards to social environmental activities that hinder standardisation and comparability. Consequently, there is a need for further research in the field, especially on specific industry contexts as well as effects of regulations and new data bases etc.

2.2. Problems with sustainability reporting

"I have been unable to discover any evidence at all which provides any kind of links between any aspect of planetary sustainability and the corporate behaviour which is being lauded. If the leading edge of corporate behaviour on social and environmental issues is truly contributing to sustainability – somebody would appear to be keeping the evidence secret." (Gray, 2010)

Despite the ability to draw on natural science, it remains a daunting task to create sustainability reporting including metrics and estimations of remediation cost involving the natural environment (Walter, 2020). Eccles & Serafeim (2013) highlight the challenge of presenting sustainability information that will be taken seriously by users of the reports, that sustainability goals that range over long periods of time, for example carbon neutrality within 10 years, seems too far away for a skeptical public. Gray (2006)

emphasises this was due to a short-term nature and that reporting is driven by concerns of potential variations in the short-term profit figure.

Sustainability reporting is supposed to include information with purpose to provide useful insights into the specific company's performance within the area, however, while providing what is believed as sustainability information, it also has flaws (Cho et al., 2015; Gray, 2006; Gray, 2010; O'Dochartaigh, 2019; Walter, 2020). For example, O'Dochartaigh (2019) and Gray (2006) found that sustainability reports were stories targeted at specific stakeholders rather than accounts of the organisation's sustainability performance and actual impact at a planetary level. Similarly, Cho et al. (2015) emphasise that an often-heard complaint is that corporations only engage with environmental and social issues on a symbolic level. That by avoiding to address the fundamentally unsustainable underpinnings of their operations and instead highlight positive impacts in the sustainability reports, organisations can appear socially responsible and environmentally friendly.

2.3. Sustainability reporting from a user perspective

To understand the rationale of sustainability reporting from a user perspective, this section will start by presenting findings from *Why and How Investors Use ESG Information: Evidence from a Global Survey* (Amel-Zadeh & Serafeim, 2018), followed by the proposition that creation and use of sustainability reporting is an iterative learning process between producer (investee) and user (investor) (Cederberg, 2019; Eccles & Serafeim, 2013; Solomon & Solomon, 2006). Finally, the challenge many companies claim to face in making sustainability integrated into strategy and operations (Eccles & Serafeim, 2013) is highlighted.

Amel-Zadeh & Serafeim (2018) found that a clear majority of the author's large sample of institutional investors use ESG information because it is financially material to investment performance, with second largest rationale was because of a growing client demand or formal client mandates. However, the sample also stressed that sustainability reporting has a lack of comparability, timeliness and reliability and that there also is a major challenge to quantify such information, all key characteristics that make information useful in decision-making processes (Amel-Zadeh & Serafeim, 2018). Eccles & Serafeim (2013) argue that neither companies nor investors can be seen as taking sustainability seriously unless it is integrated into the quarterly reporting. Until that happens, core business and sustainability will be two separate worlds with its own narrator telling a different story to a different audience (Eccles & Serafeim, 2013).

Solomon & Solomon (2006) further determine the extent to which social, ethical and environmental disclosure was being integrated into institutional investments. The literature finds that institutional investors, in general, do not consider the sustainability reporting to be adequate for their investment decisions. Instead, Solomon & Solomon

(2006), Eccles & Serafeim (2013) and Cederberg (2019) conclude that disclosure on sustainability information is a dialogic process where both the institutional investors and the companies exchange information, in order to provide and use sustainability information that is to be useful for investment decisions.

2.4. Calculate for sustainability performance

As mentioned in the review of previous literature on sustainability reporting and ESG ratings. A key challenge, among others, is how to quantify and create an account of sustainability performance. Several articles examine this challenge more deeply from different perspectives.

2.4.1. The link between financial and sustainability data

Unerman et al. (2018) study reporting and accounting for externalities with the aim to create a closer link between traditional domains for financial accounting and sustainability reporting, as well as a closer link between silos within sustainability reporting. Externality is explained in the article as follows,

“From a short-term and narrow economic perspective, negative externalities occur when a third-party individual or organisation suffers financial costs flowing from a transaction between other parties and for which there is no recourse for the third party to recoup these financial costs from the transacting parties. Positive externalities result in financial benefits for the third party.” (Unerman et al., 2018, p. 500)

Unerman et al. (2018) concludes that there is a desire for financial accounting to be comparable, complete, neutral and free from material error, which is usually equal to quantitative and monetary information. Buritt & Schaltegger (2010) states that simplified indicators for monitoring sustainability tend to be used in practice to balance the cost of developing measures with the value they create. However, Unerman et al. (2018) argue that quantitative or monetary form of information is not always suitable for externalities, rather equal to an increased risk of counterproductivity. Actors tend to perceive these individual figures as the sole truth, while externalities must be put into context to be valuable, which requires support from qualitative information. This is explained as a reason for the challenge of including externalities in the financial reporting and why sustainability reports tend to include both quantitative and qualitative information. In addition, Unerman et al. (2018) conclude that externalities are gradually integrated in financial reporting, driven by social pressure, regulations and increased knowledge of the material impact of externalities on future cash flows and strategies for the business. Some companies are at the forefront and implement new regulations before it is required due to the social pressure to be a sustainable company. It is urgent to achieve results in sustainable development and Unerman et al. (2018) claim that the fastest way to make externalities to become materially, and thus become visible in financial reporting, is

probably through regulations and social pressure (the social contract). When externalities are included in the financial reporting, improvements with regard to sustainable development is expected to take place.

Bebbington & Larrinaga (2014) investigate what traditional sustainability reporting can learn from a sustainability science perspective and conclude that today's social and environmental accounting does not reflect a company's real performance in sustainable development, further supported by (Cho et al., 2015; Gray, 2006; Gray, 2010; O'Dochartaigh, 2019; Solomon, Jill F. & Darby, 2005; Walter, 2020). Bebbington & Larrinaga (2014) argue that social and environmental accounting is rather disconnected narratives and can thus not be used to evaluate sustainability performance. The research approach of sustainability science can add value to the field of accounting research by adding a problem-oriented focus rather than having an organisation-oriented focus, together with increased collaboration between different disciplines and departments. Furthermore, the article argues that quality evaluation can be a good indicator for sustainability performance to avoid the counterproductivity that quantitative and monetary indicators can cause. The assessment of quality must be done together in the peer community, as a continuous and evolving learning process. The described findings also raise the importance of transparency regarding ESG ratings and other sustainability tools, to enable different actors to assess the company's quality, which also is supported by previous research (Burritt & Schaltegger, 2010; Walter, 2020). Bebbington & Larrinaga (2014) present a new type of approach to accounting research that can help improve sustainability reporting, but it is not a recipe for how to get accounting for sustainable development correct. This is something that must be developed together in the peer community (Bebbington & Larrinaga, 2014).

2.4.2. How to construct an account of sustainability performance

Sobkowiak et al. (2020) examine, through a qualitative case study, how the UK government develops an account of its biodiversity performance, aimed to serve the formulation of the government's policy for SDG 15: Life on Land. Making the biodiversity loss calculable should help the government to see and understand its performance and thus enable a relevant policy formulation. Sobkowiak et al. (2020) find that the UK government constructs an annual biodiversity report based on data collected from non-governmental organisations (NGOs), further analysed by a small internal project group. The achievement of calculability is temporary, and the indicators are subject to continuous evaluation and improvement. Influenced by input from sustainability experts, political actors, universities, NGOs and more, which in turn will have implications for the UK government's policy formulation. Sobkowiak et al. (2020) further problematise centrally developed indicators for SDGs and claim that locally adapted indicators are necessary due to the diverse conditions and status of biodiversity worldwide. Moreover, governments as well as other organisations, such as corporations,

will need to develop a comprehensive infrastructure to be able to make a meaningful contribution to the biodiversity challenge. This infrastructure should be a collaborative environment between different actors with complementary capabilities, so-called socio-technical arrangements. (Sobkowiak et al., 2020) In addition, the analysis provided in the article, on how national governments can achieve calculability and account for sustainable development, is proposed to be valuable for national governments and potentially other organisations, such as corporations, to contribute to sustainable development. In addition, it is said that there is a need to examine the challenges of how to create an account for other SDGs, beyond SDG 15. (Sobkowiak et al., 2020) Through these statements, the authors of this report identify a necessity to investigate whether the analysis of Sobkowiak et al. (2020) actually contributes valuable insight to corporations and other SDGs, or whether companies that focus on other types of SDGs will have different needs and challenges to account for and contribute to a sustainable development.

This report thus aims to examine the calculation process of companies' sustainability performance, which leads to the following research question:

How do companies become capable of constructing an account of their sustainability performance?

The important role of calculability in making sustainability visible and enable action (Callon, 1998; Miller, 2001) towards a global sustainable development makes the topic of this report highly relevant to study. This report aims to contribute to the previous literature on sustainability reporting in general and to the previous literature on calculation for sustainability in particular. The main focus for contribution will be on Sobkowiak et al.'s (2020) study, by examine the meaning of their findings in the context of corporations and by including a broader set of SDG:s. As such, the authors of this study find it appropriate to draw on the same theoretical lens as Sobkowiak et al.'s (2020), "*The three stages of calculation*" developed by Callon & Law (2005), further explained in the following section, 2.5.

2.5. The Three stages of calculation

To analyse the case of the UK government, as mentioned above, Sobkowiak et al. (2020) use "*The three stages of calculation*" developed by Callon & Law (2005). The model is built on Callon's (1998) argument that calculability is required to enable organisations to internalise externalities. Miller (2001) uses the expression "*what is counted usually counts*" to describes the power of calculability and argues that calculation makes certain activities visible, which can contribute to comparability and accountability. Further, achieving calculability requires collaboration between different disciplines (so-called socio-technical arrangement) (Bebbington & Larrinaga, 2014; Callon, 1998). Callon (1998) draws on Goffman's (1974) theatrical metaphor to explain framing and describes that a socio-technical arrangement frames a space within which certain calculation

becomes possible. This means that some things are included in the frame while others are excluded, due to shared assumptions and boundaries, which in turn helps actors to see a type of reality and judge possible actions. This is similar to Hines' (1988) way of seeing the world and the role of accounting in it. Hines (1988) claims that reality is constructed and that different actors' views of reality (that is their full picture of the reality), may be diverse. Some things are included while others are excluded and Hines (1988) explains and problematise the role of accounting in creating and visualising these boundaries. On the one hand, society can change the full picture (that is the reality) by pushing companies to include new aspects as part of the full picture. On the other hand, it is up to the companies to decide how to shape the reporting of these new aspects and in that sense interpret the reality in their own way. By doing so, companies create reality. A conclusion of the discussion above is that reality is constructed through interactions between several parties (Bebbington & Larrinaga, 2014; Callon, 1998; Hines, 1988; Sobkowiak et al., 2020).

Situations with a significant number of controversies and a lack of stable knowledge and ways of measuring, are defined by Callon (1998) as "hot situations", which are particularly difficult to find a common frame for. These situations require collaboration between both experts and non-experts, which is crucial for developing knowledge, identifying possible ways of measuring and eventually create a common frame for the field. (Callon, 1998)

Furthermore, Callon (1998) argues that investments in new instruments are required to make it possible to measure externalities. Callon & Law (2005) add that it is necessary to find a balance in resources to achieve calculability, too few resources (rarefaction) as well as a too wide set of resources (proliferation), will hinder calculability and create what Callon & Law (2005) entitle non-calculability. This is similar to Lozano's (2020) statement in section 2.1.2, of the importance to balance number of used TIAs, to be able to make a valuable evaluation of an entity. Callon (1998) argues that integration of externalities into organisations is an ongoing and evolving learning process, a continuously re-evaluation, which is also supported by recent research (Bebbington & Larrinaga, 2014; Cederberg, 2019; Sobkowiak et al., 2020). A perfect solution that is able to consider all possible outcomes will never be found. However, despite this managers, policy makers and financial market participants must act in line with the best of current knowledge, and at the same time be ready to adapt to new knowledge as it evolves. (Bebbington & Larrinaga, 2014; Cederberg, 2019; Sobkowiak et al., 2020).

Further, Callon & Law (2005) raise the complexity of calculability caused by the judgement between factors such as time, context and geography, which makes calculability expensive to achieve. Callon & Law (2005) emphasise that calculability is not something natural, rather something we create. The creation of calculation is explained as a three-stage process, *The Three stages of calculation* (Callon & Law, 2005).

“First, the relevant entities are sorted out, detached, and displayed within a single space. Note that the space may come in a wide variety of forms or shapes: a sheet of paper, a spreadsheet, a supermarket shelf, or a court of law - all of these and many more are possibilities.

Second, those entities are manipulated and transformed. Relations are created between them, again in a range of forms and shapes: movements up and down lines; from one place to another; scrolling; pushing a trolley; summing up the evidence.

And third, a result is extracted. A new entity is produced. A ranking, a sum, a decision. A judgment. A calculation. And this new entity corresponds precisely to - is nothing other than - the relations and manipulations that have been performed along the way.” (Callon & Law, 2005, p.719)

2.6. Theoretical framework

In order to understand how companies create an account of their sustainability performance, Callon & Law’s (2005) *Three stages of calculation* serve as a useful tool. According to Callon & Law (2005), it is necessary to consider the three stages in order to be able to frame a calculable space, which in turn is required for the organisation to internalise externalities. Sustainability issues are an example of such externalities. Similar to the approach of Sobkowiak et al. (2020), the authors of this study translate each stage to a question, relevant to address for each case, presented below.

The first stage - Detachment and layout in a single space

What entities are to be brought within the framed space?

Decide what type of sustainability data to include to reflect the company’s sustainability performance.

The second stage – Transformation and manipulation

How are these entities going to be manipulated and transformed within the space?

Decide how the sustainability data should be combined and transformed into useful measurements of performance to address a company’s sustainability performance.

The third stage – Extraction of results

What kind of result will be extracted; what new entity will be produced?

Decide how these sustainability performance measurements should be reported.

Callon & Law's (2005) *Three stages of calculation* will be valuable for analysing and structuring the empirical material in this report, with the aim to understand how companies strive to achieve calculability for its sustainability performance. In other words, understand how the framing process for these companies addresses the three questions presented above. In contrast to Sobkowiak et al. (2020), this study contributes with the context of companies while Sobkowiak et al. (2020) studied a government. In addition, this study examines a broader sustainability perspective, covering several SDGs, rather than exclusively SDG 15, but still with a main focus in the environmental perspective of sustainability. Finally, this study also examines how the results of the calculation process are used by including a user perspective through additional interviews with research analysts and institutional investors, and thus focus less on exploring the internal strategy formulation within the case organisations.

3. Method

The following section describes the research methodology of this study. Section 3.1 motivates the choice of a qualitative multiple case study, the selection of case companies and the inclusion of a user perspective. Furthermore, section 3.2 provides a thorough description of the data collection, while section 3.3 explains the analysis process of the empirical material.

3.1. Research design

3.1.1. The choice a of qualitative multiple case study

The initial motivation and guidance for the topic in this report was the authors' curiosity about the new available tool for assessing companies' sustainability performance, named "Sustainability assessment" in this report. "Raw curiosity" is a valuable guide for further research on the social role of accounting in this increasingly complex world with growing interest in environmental and social impact, as well as blurred boundaries between different types of organisations and nations (Hopwood, 2005). Through previous work experience within the finance industry, the authors have noticed an increased interest in sustainability from the financial market, concerns about how to navigate sustainability and not least how to navigate the approaching EU Taxonomy. This curiosity led the authors to the desire to examine this tool in more detail, to find out what it is, how it is used and why.

A qualitative case study was considered appropriate, due to its effectiveness when the study aims to examine specific circumstances and why or how something works in a certain way (Yin, 2014). The authors found that there were currently only a few Sustainability assessments available on the market, which opens up the possibility of examining these few cases in more detail. With regards to the intended contribution of this study, to examine the usefulness of Sobkowiak et al.'s (2020) findings in a corporate context, a multiple case study was considered appropriate for developing knowledge if the findings are true in more than one specific case (Scapens, 1990). By using a multiple case study, the analysis is carried out at an organisational level through insights from the three specific case companies, which limits the depth of analysis in each specific organisation. However, this limitation is considered acceptable due to the value of multiple cases for the purpose of this study. Furthermore, it will be valuable for future research to make a deeper analysis of a specific case organisation to develop a deeper understanding of internal activities related to a Sustainability assessment, as well as quantitative studies on the effects of the new tool, when more data is available in the market.

3.1.2. The selection of case companies

Given the scope and time frame of this report, three case companies were considered manageable to include as a part of the study. All three are public companies, listed on either the Large or Mid Cap segment, and belong to the Nordic real estate industry, an industry which in turn constitutes four of the six companies who have undergone a Sustainability assessment until the beginning of 2021. The Nordic real estate sector is at the forefront of sustainable development and the use of green financing (Climate Bonds Initiative & Handelsbanken, 2018). As an example, the world's first green corporate bond was issued by a Swedish real estate company in 2013 (SEB, 2013). The choice of the three case companies was therefore considered appropriate as their probable prominent position in sustainability was expected to provide the authors with comprehensive information on how companies construct an account of their sustainability performance. This is further supported by Yin (2014), who argues that the choice of companies in a case study should fall on organisations where the research question is likely to exist. In addition, the expected similarities between the three case companies in terms of development level in sustainability performance, are considered valuable for the purpose of this study (Scapens, 1990), which intends to examine the usefulness of Sobkowiak et al. (2020) proposed approach to construct an account of sustainability performance, in a corporate context.

3.1.3. The inclusion of a user perspective

Furthermore, Sobkowiak et al. (2020) suggest that a user perspective is important to consider in the calculation of sustainability performance from a company perspective. As such, in order to investigate calculability in the context of a corporation, interviews with investors and research analysts were considered necessary for this study. Institutional investors were targeted because of their professionalism and expected knowledge of public investments and sustainability performance (The one initiative, 2020). In addition, several research analysts within the financial sector, both equity research analysts, credit research analysts and ESG research analysts, were interviewed. The authors of this study consider research analysts as potential users of this new tool as well as guides to investors regarding company's financial and sustainability information. Furthermore, sustainable finance advisors within banks, as well as a sustainability consultant in real estate & construction, were interviewed in order to get in-dept knowledge about the real estate sector and its funding possibilities. The empirical material indicates that a reason why companies undergo a Sustainability assessment is to make it possible to measure and visualise the company's sustainability performance and thus enable improvement from the current level, which also is in line with the tool's purpose. The mentioned driving force indicates that a Sustainability assessment is appropriate to study to answer the research question in this report: ***How do companies become capable of constructing an account of their sustainability performance?***

3.2. Data collection

3.2.1. Initial research

Initially, the authors conducted desktop research to learn more about the new tool, sustainable investments, and sustainability in general. At an early stage, an interview was scheduled with the Research Organisation (“RO”) that developed the tool, to gain more insight into the development process and driving forces behind it. Further, interviews were scheduled with the three case companies, all of which had undergone the Sustainability assessment process. As the next step, the authors began to examine findings from previous research on sustainability reporting and investors’ use of sustainability information. The insights and gaps from previous literature together with the authors’ curiosity about the new tool, guided the development of an interview template for the first interviews. A general interview guide for the companies is presented as an example in Appendix 1a.

3.2.2. The selection of interviewees

The case companies’ interviews were conducted with top management, that is, CEO or CFO, who was considered to have extensive knowledge of their respective Sustainability assessment process and overall sustainability strategy. Through these interviews, the authors gained knowledge about the Sustainability assessment processes and the driving forces for these companies. As the next step, interviews were conducted with equity, credit and ESG research analysts (“analysts”), who have coverage of one or several of the case companies. Further, interviews with institutional investors were scheduled. The selection criteria for these investors were either ownership in one or several of the case companies, or a dedicated sustainability focus for their investments (referred to as “impact investors” in this report). Investors who met any of these criteria were considered more likely to use the results from a Sustainability assessment at this early stage and thus to be able to provide the authors with valuable insights. However, the majority of the investors interviewed are not classified as “impact investors” which mitigates a potential selection bias. A list of the interviewees is presented in Appendix 2, but a specification of detailed titles is avoided in order to preserve the respondents’ anonymity. The interview guide for analysts and investors was based on insights from previous literature, the authors’ curiosity about the tool and knowledge from previous interviews. In addition, the guide was continuously adjusted based on new insights along the way. A general interview guide for investors and analysts is presented as an example in Appendix 1b.

3.2.3. The interviews

A total of 19 interviews were conducted, lasting 30-70 minutes each (see Appendix 2). The interviews were conducted through a semi-structured approach, which means that an interview guide was used to create a structure for the interview with the possibility of

making deviations from the guide depending on the answers given by the interviewee. Some structure is preferable when the study has some form of focus already in the initial phase, while less structure increases the possibility of creating a better understanding of the specific context that the interviewees experience (Bryman & Bell, 2017). Due to the limited time frame for this study, combined with a need to understand the interviewees' perception of their reality, a semi-structured interview approach was considered to provide an appropriate balance.

The majority of the interviews were conducted in Swedish, with the exception of two interviews held in English. All interviews were conducted in a digital setting due to the current pandemic restrictions. The digital setting can limit the authors' ability to get a feel for body language and the meaning of things that are not expressed in words. At the same time, it can be considered a convenient solution for the interviewees who are now used to digital meetings and appreciate its time efficiency, which can increase the possibility of gaining access to interview candidates. In addition, the researchers' physical absence may make it easier for interviewees to share sensitive information (Bryman & Bell, 2017). In two of the interviews, more than one interviewee participated, which means a risk that the interviewees influence each other. As this was a condition set by the interviewees to be able to accept an interview, the authors considered this to be the best possible solution.

All candidates were informed that the interview will be anonymous, and an interview guide was sent to the candidates in advance, which included the overall focus of the interview. Sending the intended topics for the interview in advance may risk that the interviewee prepares arranged answers at the expense of the true reality. However, in this situation, it was considered to have a positive effect on whether the interviewees would have accepted the interview request, as sustainability is a relatively new topic with a lot of uncertainty. In addition, the pre-sent guide helped the interviewees stick to the topic, which was especially valuable for those interviews that were limited to only 30 minutes. All interviews were recorded and transcribed manually after each interview. The material was continuously analysed by the authors through an abductive process, that is, an iterative movement, back and forth, between the empirical material and the theory (Lukka, 2014). The abductive method enables a more holistic view and to theoretically contextualise the most important empirical findings, to find explanations in interpretive research (Lukka, 2014). Further, the abductive approach, enables the authors to use early findings and develop future interview questions and research, based on these findings. Both authors were present at 18 of the 19 interviews, with shifted responsibilities to either guide the discussion or taking notes and ask follow-up questions. Being a skilled questioner is an important ability to have as a researcher in a case study (Yin, 2014), for which the joint participation and the shared responsibility between the researchers increase the possibility of successful interviews.

3.3. Data analysis

The transcribed interview material was further coded manually in Microsoft Word through an abductive process. Categories from the theoretical framework were used as a guide to identify interesting patterns and the additional findings that were discovered were sorted into new theoretical sub-categories. Examples of such sub-categories are, identified problem areas with the EU Taxonomy, characteristics of a “green” company and level of knowledge in sustainability. The authors discussed and analysed the coded material together through the lens of the developed theoretical framework by Callon & Law (2005) and used a bullet-point approach to initially find how the case companies address the three questions in the theoretical framework. In parallel, continuous links were made to the domain literature, which is presented in section two of this report. As the next step, the analysis was written with support from interview quotes, carefully translated into English by the authors to ensure the original meaning of the quote. Since a qualitative study based on interviews will be influenced by the specific interview candidates’ explanation of certain situations, multiple sources can be used to cross-check the findings (Bryman & Bell, 2017). To increase the credibility of the interviewees’ descriptions of reality and the authors’ interpretation of the interviews, secondary sources such as annual reports, sustainability reports, Sustainability assessment reports, newspaper articles and more, were also analysed as a part of the empirical material. Finally, the conclusions of the study and contributions to previous research were summarised in the report.

4. Empirics

In this section, we present our empirical findings and discuss them in terms of our theoretical understanding based on Callon & Law's (2005) *Three stages of calculation*.

4.1. Background - An attempt to connect financial and sustainability data

The development of a science-based methodology to assess climate risk at company level

In 2019, a research organisation (“RO”) released a study with the aim to provide a starting point for a methodology that gives investors and other users a practical tool for understanding climate risk and which companies that are best situated to contribute to a climate resilient and low-carbon future. RO applied an iterative approach to developing the methodology, with involvement of several financial sector players, including investors, as well as companies, in order to get guidance in the development process. As such, a key strength of the methodology was in the facilitation of a dialogue between investors and companies – a unique way of processing sustainability information in relation to other ESG rating providers at the time. Common practice involved mainly publicly available data (such as annual and quarterly reports). This latter, commonly used, approach was criticised by both RO, investors and research analysts interviewed in this study, due to its historical characteristics, who emphasised the importance of also looking ahead. RO further learned that investors in their study saw sustainability aligned companies as long-term survivors, and, as such, implied lower risk:

We were looking for a way to help investors to understand a company. We knew that there was a need since investors said that it was hard to understand which companies are transitioning and which are just talking about it [sustainability]. That is, which [companies] have lower risk. (RO)

RO's study came as a result of a demand from the financial sector who began to integrate climate risk into their business models and financial decision making but had problems with understanding and integrating available sustainability reporting. Company level sustainability information had mainly been sourced from 3rd party ESG data providers and sustainability reporting by companies themselves. Both had been seen as a valuable start but characterised by limitations and inconsistencies according to most of the interviewees. RO further acknowledged four problematic areas with sustainability reporting in general and ESG ratings in particular:

1. First, the lack of consistency and transparency in the ESG rating providers methods make it difficult to compare companies across and within sectors. Several of the interviewees also highlight that providers of ESG and sustainability information have different approaches regarding relative weights on different

sustainability aspects, approaches to assumptions when there are gaps in the data, and more, and explain it is potentially due to the relatively new phenomenon sustainability reporting and ESG ratings are.

The important thing for us is transparency in how they do things. Some are not transparent in their methods and then we can not ensure what they actually have done, which lowers credibility. It is important to know how they calculated and measured, then we can judge from there whether it is useful or not. Transparency is most important, we raise that with everyone who wants to give us sustainability information. (Investor 1)

2. Second, many of the current methodologies used by ESG rating providers rely heavily on carbon emissions as a proxy for climate impact and risk, according to RO. This approach gives a good indication of a company's contribution to climate change, however, it is not forward looking, which also is emphasised by the interviewed investors. Further, RO emphasises that ESG, rating and index providers often focus on benchmarking within sectors, which makes it problematic for investors to use the information in a holistic way. One of the interviewed investors highlight this type of benchmarking and lack of transparency in methods as the main reasons to why they have boycotted all types ESG ratings and instead conduct assessments by themselves:

There are ESG rating providers who sell services, such as Sustainalytics, MSCI, ISS.. they are awful, really! They sell a rating covering the whole world, they grow fast and use distribution keys, weighting, based on industry. If you use distribution templates, then you end up completely wrong. (Investor 6)

3. Third, there is not one accepted standard for how companies are to report on climate risk or impact, with a growing number of voluntary reporting initiatives such as the Global Reporting Initiative ("GRI"), The Greenhouse Gas Protocol, Carbon Disclosure Project, and so on. RO argued that the inconsistency in type of reporting makes it hard to compare the companies in a systematic way, which several interviewees also highlight.
4. Lastly, reporting by companies may not provide climate risk information in a way that allow integration into existing systems used by the financial sector. The situation is intensified by that the financial institutions themselves are not certain what kind of information they need.

Sustainability Assessment

RO decided to follow-up the initial study with a methodology mitigating the problems they had found, to be provided to investors and companies. The methodology ("Sustainability assessment"), aims to enable the financial sector to include climate risk assessment into their investment decisions and pricing, thus facilitate greener investment decisions:

We wanted to explore and see if it could be a demand for Sustainability assessments and developed it after the investors demand. A mix between a demand from investors and a curiosity and interest from us. (RO)

As such, the methodology's purpose is to i) provide a tool to identify companies transitioning towards a low carbon and climate resilient future, where the tool will help to quantify and track the sustainability development over time, and ii) provide an assessment of companies' environmental governance structure, including how the companies respond to recommendations on climate risk. For the methodology to become useful, governance, revenues and investments (including research and development) were the general parameters chosen to be assessed, with the following motivational quote from RO:

The methodology should be a way to combine the environmental and financials in a more explicit way. That's why we have this focus on revenue and investments, to make it really clear. The key value with our shades is that it is a very simple way to communicating climate science to the financial sector. Very intuitive. (RO)

This study finds support for this methodology by the investors who expressed the following:

If you look at sales, you get a status of what it looks like today, it is a basis for what has been done historically. Capex [investments] will be important, here capacity is being built for the future. I would focus on Capex [investments] because it provides a signal for future cash flows. What the investment will lead to, if it is green in five or ten years, which is my investment horizon,. Then I have to include this in the financial modeling and also consider how this information should be valued. (Investor 4)

The final stage of the Sustainability assessment is the grading, where RO classify revenue and investment into different classifications ("shadings") based on how sustainable they are considered to be, as illustrated in Figure 4.1 below. The process finally culminates in a report, including both quantitative and qualitative findings, shading as well as information about methods and assumptions, to enable cross-checking and validity confirmations – to mitigate the mentioned weaknesses among current ESG ratings.

<i>Shadings from the Sustainability assessment</i>	<i>Examples</i>
 Dark green is allocated to projects and solutions that correspond to the long-term vision of a low carbon and climate resilient future.	 Solar energy projects
 Medium green is allocated to projects and solutions that represent steps towards the long-term vision but are not quite there yet.	 Green buildings with a high level of certification and energy efficiency
 Light green is allocated to transition activities. These projects and solutions could have lower emissions, but do not by themselves represent or contribute to the long-term vision	 Substantially more efficient manufacturing of fossil fuel intensive materials
 Yellow is allocated to projects and activities that do not contribute to transition. These activities could have some emissions and be exposed to climate risks. This category also includes activities with too little information to assess.	 Efficiency in fossil fuel infrastructure
 Red is allocated to projects and activities that have no role to play in a low-carbon and climate resilient future. These are heaviest emitting assets, with the most potential for lock-in of investments and risk of stranded assets.	 New infrastructure for coal

Figure 4.1: An illustration of the different shadings from a Sustainability assessment and example interpretations.

4.2. The Three stages of calculation – How the case companies construct an account of their sustainability performance

4.2.1. The first stage - Detachment and layout in a single space

The first stage in Callon & Law's (2005) "*Three stages of calculation*" is translated to address the question, what entities are to be brought within the framed space? That is, what type of sustainability data should be included to reflect the company's sustainability performance.

Data collection in an iterative manner

The Sustainability assessment is a desk review, based on information provided by the assessed company and gathered during different types of correspondence. The information includes company reporting, information provided by the companies directly, information from public sources, academic publications, and grey literature.

We [RO] do a governance scoring. We look at everything related to the environment and governance of the company. Sustainability reporting, anything they do on emissions, metrics they report on and track, strategies and more. This part is quite straight forward but a lot of documentation. (RO)

RO describes the assessment process (as illustrated in figure 4.2) as iterative, a lot back and forth between RO and, not uncommonly, several different departments and people from the assessed company:

We do not have a streamlined process yet, as the Sustainability assessment is a new product. We get a big chunk of documents from the company. This is really a collaborative process with the company. For some sectors we know what type of info we need (for example in the real estate sector). We send an excel sheet about what metrics we need, and the company fill in as good as they can, or the company sends over the info as it is structured in the accounting system and we then structure and extract useful data. We also ask for additional information or for a different structure of the info if needed. This is key in our product; companies do not really report and track financial and environmental information together. We ask for these two together and that is a tough process for many companies to process. (RO)

This iterative process contradicts a reflection made by an interviewed investor who have seen that few companies include sustainability management in the senior management group, which the investor emphasises is important for integrating sustainability into daily operations and strategy. However, RO's methodology seems to mitigate compartmentalisation by including both a historical point of view (revenues) and forecast point of view (investments). Two of the interviewed case companies emphasise the involvement of several departments, including sustainability department, top management and the finance department, during the Sustainability assessment process:

The Sustainability assessment process has brought these two departments [finance and sustainability] closer together. Our Head of Sustainability and I usually say that it feels like we work part time in both departments, the both of us. This applies not only to sustainability and finance, but also to other departments such as development and property management. Everyone participates, as when we certify our properties, everyone gets involved, those who build new ones, those who manage the existing buildings and we who work with administration. It provides a very close relationship between the departments which also has other positive benefits. We have become closer with common strategies and goals. (Company 2)

With the third interviewed case company clarifying that top management have been involved in their sustainability efforts for a long time, before RO's methodology existed. However, the same case company highlights that RO came with a new approach regarding the methodology relative to what they have seen from other ESG rating providers, that RO developed a method applicable and comparable between different types of companies. This supports RO's strategy of mitigating the standardisation problem of

sustainability reporting and ESG ratings by applying a method accepted by investors and companies. A problem the EU Taxonomy also aims to approach (PWC, 2021).

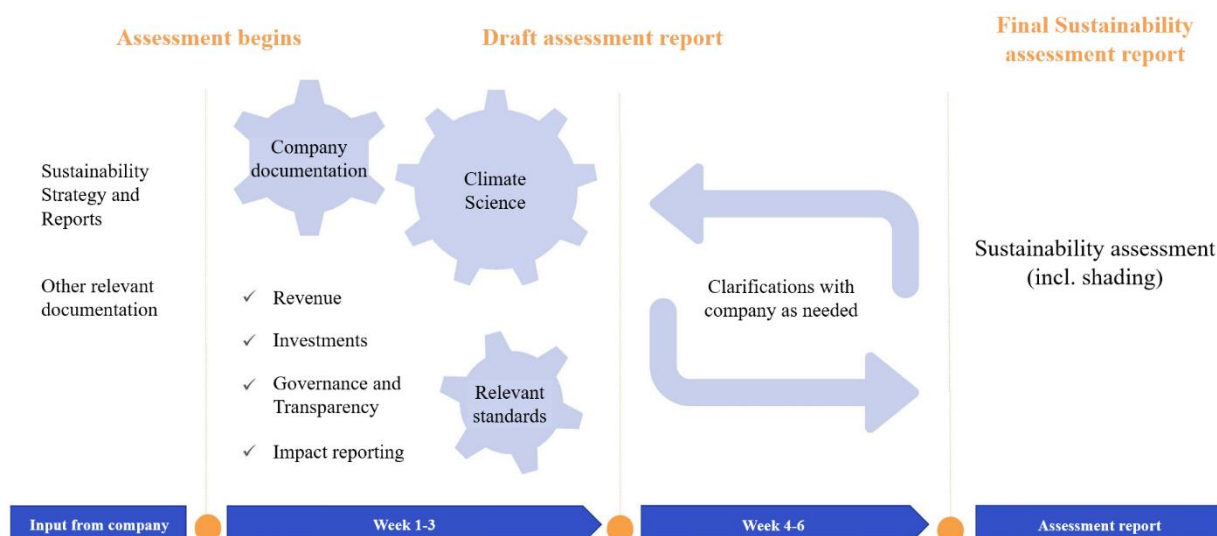


Figure 4.2: The Sustainability assessment process

The importance of the real estate sectors development within sustainability

The three interviewed case companies emphasise the general easiness of the Sustainability assessment process, as they already have a lot of documentation in place from various previous real estate sustainability certification processes, described by one of the interviewees as following:

The process was not really a challenge. You have to submit a large amount of data for the assessment. Since we had already complied a lot of data for another international evaluation, we gave it to RO. They could then go through and choose what they needed for their analysis. (Company 2)

The interviewed case companies argue that the real estate sector is one of the largest carbon oxide emitters and is, as such, evaluated by a various amount of opinion providers who all demands time and data from the companies. The Sustainability assessment is thus seen as a possible solution to provide solely one report, covering all relevant sustainability aspects in an understandable and transparent way:

We are evaluated by so many rating and certification institutes of various kinds. We really have the ambition to be as transparent as possible towards our investors. But it would take a lot of time to answer everything. If we can use something that meets all the wishes of the investors and present it, then it would be so much easier for us. It is better if everyone can retrieve the information they need from a single report. (Company 2)

The case companies' decisions to do the Sustainability assessment was driven by a number of reasons. For example, i) to learn how to measure and visualise their sustainability footprint, ii) to identify and learn about potential areas for improvement, iii) to attract attention to the sustainability efforts done in the real estate sector, as the

financial market is perceived to miss out on the information, and iv) to see alignment with the upcoming EU Taxonomy regulation. RO emphasises that the real estate sector has developed quicker than other sectors and that the specific companies that had undergone the Sustainability assessment already have good governance and good sustainability reporting in place:

The Swedish real estate sector is really on the ball. These companies have good governance and good sustainability reporting. The sector is ahead in an international context when it comes to sustainability. Of course, it is easier to go through a process like this then. (RO)

The collection and processing of data was seen by RO as one of the larger problems in the process, due to the different structures the received information had. However, RO also noted that the process would have been worse if the companies had not been as far progressed in its sustainability reporting procedures as they were.

Conclusion – The first stage: Detachment and layout in a single space

The empirical material explains that the Sustainability assessment was developed by RO as a result of an increasing demand from investors of a transparent and practical tool for understanding climate risk and which companies that are best situated to contribute to a climate resilient and low-carbon future. The foundation of the Sustainability assessment came from a research study based on data from both the financial and commercial sector. Through the research study RO learned about current problems with sustainability reporting and ESG ratings, and, as such, decided to focus the assessment on governance, revenues and investments, an approach that connects financial and sustainability data, accepted and encouraged by investors and companies included in the initial study.

Further, the interviewed case companies decided to undergo the Sustainability assessment as they saw RO as a strong supporter for how to measure sustainability performance. In addition, the assessment is seen as a possible substitute to replace the myriad of different rating institutes, which together with the lack of standardisation in sustainability reporting are indications for Callon's (1998) definition of a "hot situation". However, the real estate sector holds a special position when it comes to sustainability, due to its long history of a widespread use of environmental certifications of buildings. Despite the many different real estate sustainability certifications available on the market, the certifications seem to have contributed to some form of standardised view of sustainability in the real estate sector and serve as one type of many other data points used for RO's assessment of real estate companies. As mentioned, RO describes the sector as well-developed when it comes to sustainability reporting, where the Sustainability assessment process seems, to a large extent, act as an interpretation of data already in place.

In addition, the assessed company seems to have certain power in the first stage, in detaching and layout in a single space, by providing input data for RO's assessment. Further, the iterative data collection process between the case companies and RO also

mitigates compartmentalisation within the company, as the process enhance internal collaboration between different departments.

Finally, the approaching EU taxonomy regulation seems to have an impact on the companies' need for support on how to quantify and report on its sustainability performance and EU Taxonomy alignment, which also have influenced the design of the Sustainability assessment.

4.2.2. The second stage – Transformation and manipulation

The second stage (Callon & Law, 2005) is translated to address the question, how are the entities going to be manipulated and transformed within the space? That is, decide how the sustainability data should be combined and transformed into useful measurements of performance to address a company's sustainability performance.

Transformation and manipulation of sustainability data into numbers

As mentioned, RO is considered an important party for standardising the method for assessing sustainability performance, applicable for different types of companies and sectors. Moreover, to identify appropriate metrics and KPIs to enable comparability between companies, explained as follows by one of the companies:

RO tried to find a method that they can apply to several different companies, an attempt to standardise what to look at. What is important? What key figures should you look at? What do you need to achieve to get dark green shading etcetera? (Company 1)

The Sustainability assessment provides the following common KPIs for real estate companies, developed from RO's research: i) energy use per square meter, ii) environmentally certified buildings as a percentage of the area, iii) emission intensity scope 1 and 2³ per square meter, and iii) percentage of area heated directly by fossil fuels. In addition to these KPIs, the share of sustainable revenues and investments is classified (shaded), through a bottom-up approach based on each company's specific business conditions, RO's research and the EU Taxonomy. To ensure a correct interpretation of input data in the common KPIs and the custom shadings, RO has a continuous dialogue with the company during the assessment process, which enables clarification of the interpretation if needed (see Figure 4.2). RO also describes that a potential risk with the Sustainability assessment, from a client company's point of view, is that the result might differ from the company's own belief about their sustainability footprint. One of the case companies highlights this potential risk as well, however, that RO's iterative process is

³ The Greenhouse Gas Protocol, which is the most widely used international accounting tool for measuring greenhouse gas emissions, divides the emissions into three categories (scope 1-3) to reflect organisations' indirect and direct emissions. Scope 1 emissions are those that are caused directly by an organisation's activities. Scope 2 emissions are indirect emissions, caused an organizations energy consumption. Scope 3 emissions are all other indirect emissions, as a result of an organization's value chain. (European Commission, n.d.)

seen as a mitigating factor. A case company argues that a different view most likely would be due to lack of knowledge, lack of relevant data, which the company then could provide to RO, to align the pictures of the company:

We have always had a very open dialogue with RO, the important thing for us is to make sure that they get the information they need to make their assessment. If we have a very different views on something, it must be because we have not given them the right information and then we must make sure to do so. We solve misunderstandings. (Company 2)

From RO's perspective, the main challenge in developing the assessment is to find proper links between the financial and sustainability data. However, this challenge is also what the Sustainability assessment aims to solve, and the pressure the EU Taxonomy intends to create (PWC, 2021). One analyst adds caution to quantifying sustainability performance at any cost due to the possible counterproductivity it may lead to. Quality before quantity is often valuable in terms of sustainability, which quantification sometimes is unable to consider. The analyst prefers, in line with the majority of respondents, to use quantitative sustainability data in order to be able to measure and follow up, supported with qualitative information to put the numbers in a context:

A lot of information is missing, sometimes the discussions are about being able to measure everything, which I think is wrong. It can push the wrong decision. If a parameter is how many jobs you have created, the focus may be on creating more jobs rather than improving the quality of the jobs you have already created – what is best? Just because it is easier to measure the number of jobs it does not mean that it is the best solution. Measuring everything is not optimal. Often you need to support the quantitative data with qualitative descriptions. This is something that many companies miss, which makes it difficult to follow, difficult to see the trend (Analyst 2)

Another analyst argues that companies performing well in sustainability often present quantitative data and let the numbers speak for themselves. The analyst further emphasises that companies performing less well within sustainability tend, to a larger extent, report long-term goals and qualitative data.

The impact of the EU Taxonomy in transforming and manipulating the data

The case companies express a need for support on how to report on its EU Taxonomy alignment. The EU Taxonomy sets the scope for what that is to be market praxis for sustainability reporting and defines certain KPIs, however, interpretation is still required to transform parts of the regulation into numbers and KPIs.

Many actors grasp the green definition of the EU Taxonomy that is in the annex “climate change mitigation” and “climate change adaptation”, but then it is the part, “do not significant harm” where you must show that you do not harm any of the other climate areas [EU defined climate targets]. In that part, the definitions are vague and require a lot of interpretation. (Financial advisor 2)

This quote introduce the impact of the EU Taxonomy on how the sustainability data is manipulated and transformed in the Sustainability assessment process.

All interviewed case companies identify themselves as sustainable companies that have come much further in their sustainability performance compared to their peers. The companies know that they will need to report their EU Taxonomy alignment in the annual report of 2021, and want to be at the forefront and adapt in advance:

We wanted support before the EU Taxonomy regulation enters into force. The Sustainability assessment is structured to show that x% of our revenues, projects and investments are aligned with what the EU Taxonomy was expected to be at that time. Now we will see whether it will be so or not, if the EU Taxonomy will be adjusted. We want to focus on what is right. (Company 2)

However, one company clearly states that the EU Taxonomy is not the reason why they certify the buildings and undergo a Sustainability assessment. The reason is to be able to measure and thus learn where they can improve their sustainability performance. Nevertheless, the empirical material clearly indicates that the EU Taxonomy affects how the Sustainability assessment is designed and how the data is translated into numbers, further explained by RO as follows:

Our assessment can help companies to get a sense internally where they are and show to their investors that they are ahead. We look at the EU Taxonomy, but instead of just delivering a check, is the company is aligned or not, we provide much more context with the shades. It is like a premium product for companies looking for assessing their EU Taxonomy alignment and something to communicate. We are much more comprehensive than the EU Taxonomy. Demand from investors is increasing for these types of sustainability assessments but also the big regulatory push from the EU Taxonomy. This will require that companies provide more information on the greenness of their activities. (RO)

Investors argue that formal requirements, for example the EU Taxonomy, are valuable to enable development of a market praxis and minimum requirements for sustainability reporting, which will drive the slowest companies to also adapt to increased transparency. Increased transparency and standardised reporting are expected to provide a common frame of sustainability, that will enable investors to compare companies.

The importance of the Research Organisation's legitimacy to reach calculability

Through the analysis, it becomes clear that RO has a powerful position in creating an account of the case companies' sustainability performance through a Sustainability assessment. The strong influence may stem from the high legitimacy that RO seems to have in the market as a result of i) its origin as a science-based research institute, ii) the recourses it possesses and thus high competence, and iii) transparency around its methods. Moreover, RO has a strong position and reputation as a successful second opinion provider in the green bond market, which seems to spill over to this new product.

RO does not verify the information it receives from the company on which to base its assessment, which could jeopardise the reliability. However, RO considers that it will be more harmful for the assessed company than for RO if the company provides misleading information, as it is a voluntary assessment and would therefore imply reputational risk as the company is actively choosing to provide false information. The risk is thus self-regulated according to RO. Investors and analysts appreciate that RO works closely with the company during the assessment, which creates legitimacy for the process. In contrast to crunching publicly available data and summarising in a single rating, for which several ESG rating agencies are criticised, as it may lead to counterproductive actions.

There are some rating providers that only rate the companies based on public data without letting the companies react. This can lead to companies appearing completely wrong because they have not reported exactly according to the template that these rating agencies use to make a classification. This then gives a completely incorrect picture due to different ways of reporting. (Investor 1)

One research analyst explains that the trustworthiness of RO depends on who you ask and that person's view of sustainability, that is, definition of sustainability. The analyst is skeptical to the narrow focus that many ESG ratings have, which can lead to a high ESG score even if the actual rating only considers a few aspects of the sustainability spectrum. The risk of a narrow view of sustainability, caused by a too narrow ESG rating, is further mentioned by another research analysts, who emphasises that actors tend to see these ratings as the sole truth of reality and take action based on that "reality":

RO seems credible, but what is written in the reports is not an absolute truth. It is credible but misunderstood what it is. (Analyst 2)

Most of the interviewees prefer a broader sustainability perspective, for example an inclusion of data about the carbon emissions and energy usage upstream the value-chain, that is, scope 3 emissions from the construction companies and energy suppliers. This type of data is not considered sufficiently covered in neither the current version of the Sustainability assessment or the EU Taxonomy. Furthermore, a recurring concern in the investors and analysts' interviews is a development for the Sustainability assessment that is similar to the development for credit ratings. A situation characterised by a strong agency problem where credit rating institutes are paid by the assessed company and where competition potentially forces them to give a higher credit rating to please the customer and thus secure reoccurring business:

Hopefully this will not be linked to individual actors. This reminds of the same problem as with credit rating agencies. I believe that there is a credibility problem when there is a competitive situation between the various rating agencies and companies paying for the service. The rating provider that does not give the desired rating can then be excluded in favor of someone who makes a more favorable rating. (Analyst 4)

RO explains that they act as an independent party and that the remuneration is structured in a way that prevents conflicts of interest and maintains independence between RO and the other parties. Moreover, one of the interviewees raises the perception that RO keeps a firm grip on the dark green shading and has only given it to companies really performing well within sustainability:

Several of the companies we work with are annoyed as they think that they should receive a higher shading from RO than what they have gotten. RO is considered [by these companies], to be too much into the details and focus too much on the risks. However, we think that RO is credible as they do not sell the dark green shading, they stick to their results from the assessment. (Financial advisor 2)

At present, RO is the only player that provides this type of sustainability assessment of a company's entire operations with links to revenues and investments. This is also raised as a concern because it gives RO a lot of power to define what is to be classified as more or less sustainable business. However, RO does not set a fixed threshold for what is to be defined as good or bad, but rather classifies the revenues and investments into different shades to enable users to define their own threshold for what that can be accepted. The shading and the absence of a threshold is appreciated by investors and analysts, and is considered as a credible approach. As such, there seems to be consensus about that it is necessary with an external party to validate the companies' sustainability profile. However, it appears that investors do not use a single actor to assess a company, rather a combination of several data points from numerous sources:

I maybe not share their opinion on all issues, but RO is an actor whose opinion you can take part of and then evaluate based on the context you are looking at, together with other sources. Again, I do not believe in relying solely on one source. (Investor 4)

Impact and lobbying from the assessed companies

It is not only RO that has a powerful role in the process of constructing an account of the companies' sustainability performance. The actual companies also have an active role in influencing several stakeholders. One of the case companies explain how they strived to make the credit rating institutes understand the value of sustainability, and finally managed to get them to include sustainability as part of the credit rating:

When the credit rating institute began to assess us, they did not take sustainability into account at all. I asked the question many times: do you not understand that a company that works actively with sustainability by definition is of a higher quality? Working with sustainability is, as we see it, a prerequisite for future profitability, in order for us to be able to attract the larger tenants who have high demands and want to have a sustainable office. Eventually the credit rating institute realised and now they also take into account how sustainable the companies are in their credit ratings, which has made me very happy because I think sustainability is very important. (Company 2)

The case companies also emphasise the importance of research analysts, that they really understand the value of dedicated sustainability work that distinguishes the case companies from their competitors. They argue that such analysts have an important role to play in helping investors navigate in the crowd of companies, which is also why the companies try to give the research analysts knowledge about their sustainability work:

An investor who has to choose between 30-40 real estate companies will listen analysts' comments. These comments are very important [for investors]. We provide analysts and financial advisors with sustainability information, so they [analysts and financial advisors] will understand it [the sustainability information] and think it is important [for financial analysis]. (Company 3)

As an attempt to influence the final version of the EU Taxonomy regulation, several real estate companies gathered in a revolt to impact the governments of the Nordic countries and the EU Commission, to act for a final version that treats real estate companies the same regardless to which country in the EU it operates in. By potentially influencing the final design of the EU Taxonomy, the case companies would also, indirectly, have a certain impact on how a Sustainability assessment is designed, as the EU Taxonomy forms part of a Sustainability assessment.

Conclusion – The second stage: Transformation and manipulation

The empirical material indicates a similar pattern of important factors in the second stage as for the first stage in how to create an account of sustainability performance. That both RO, the case companies and the EU Taxonomy constitute important roles in transforming and manipulating the sustainability data into indicators. The power of RO to construct an account of sustainability performance is possible due to its high legitimacy in the market. However, analysts and investors are not entirely convinced and raise concerns about, for example, a potential agency problem but also a lack of competition.

In addition, some investors explain that the Sustainability assessment does not cover their full view of sustainability, which the authors of this study theories as the “full picture” (Hines, 1988) that a Sustainability assessment provides is considered too narrow. A too narrow picture can in turn lead to counterproductivity, as companies and users of the Sustainability assessment potentially interpret the company as well-performing whilst the reality might be something else. This may also explain why investors prefer to use a combination of sources to evaluate a company's sustainability performance and thus cover their “full picture” (Hines, 1988) of sustainability. The argument of one analyst also problematises Miller's (2001) statement regarding the power of quantification and emphasises the importance of qualitative information to support the quantified sustainability performance, to again avoid counterproductivity. An absence of qualitative, supporting, information to the quantitative sustainability data is considered to provide a too narrow “full picture” (Hines, 1988) of the sustainability performance of the company. This indicates a need of balance between qualitative and quantitative information for sustainability reporting to become useful for thought and action.

Further, it is possible to conclude that the EU Taxonomy regulation has an impact on the design of a Sustainability assessment and thereby how companies construct an account of their sustainability performance. The case companies want to adapt in advance to the new regulation in order to be in line with their image of being a sustainable company. The companies themselves also have a potential power by influencing external parties and the final outcome of the EU Taxonomy, and thus also indirect on how to create an account of sustainability performance.

4.2.3. The third stage – Extraction of results

The third and last stage (Callon & Law, 2005) is translated to address what kind of result will be extracted; what new entity will be produced? That is, deciding how the sustainability performance should be reported. In this study, the extracted results constitute of a Sustainable assessment report, including both quantitative and qualitative findings, a shading as well as information about methods and assumptions. Further, the authors identify several findings, presented below.

Follow-up after a Sustainability assessment

The frequency of the sustainability reporting is also of importance, according to most of the interviewees. The case companies express their intention of following up on the sustainability KPIs as often as possible, preferably on a quarterly basis, as the information is considered relevant and for investors to be aware of. The companies argue that an increased frequency of sustainability reporting will increase the attention from capital markets and other users towards the company's sustainability performance and thus its relevance. As such, the previous sustainability neglect from the financial market, highlighted by the case companies, still seem to trigger the companies' incentives to report more often on the subject.

We report sustainability information each quarter, others report annually. To report once a year is not interesting, there is a delay in time. Quarterly [sustainability reporting] is more interesting, at least initially, when a lot is happening. The market will demand this [quarterly sustainability reporting], they will want to follow up on these numbers all the time. (Company 1)

The increasing demand of sustainability reporting from the financial markets is supported by Analyst 1 who believes investors will be stricter in their sustainability due diligence going forward: *“Investors will demand more sustainability information from the companies. I believe investors will have to motivate why they invested, why they consider the company as sustainable”*. The same analyst emphasised that an increased frequency would enable trend analyses and thus a greater understanding of the company:

We follow up all other figures quarterly. That enables analysis, [to follow] what goes up or down, not just provide visionary goals said to be fulfilled ten years ahead. (Analyst 1)

However, one of the interviewed investors argues against a high frequent reporting pattern, as such potentially could encourage short-termism in a context where a long-term robust solution is necessary:

To invest based on reports makes the whole thing counterproductive, as ESG often takes time to realise. You do not want short-termism. Instead, qualitative information can contribute to cover all the days of the year, rather than the specific moment when the report is released. (Investor 1)

The value of shadings from a user perspective

An overall critique from the interviewees regarding the EU Taxonomy is its binary way of defining what should be classified as green, using fixed thresholds. The shadings that a Sustainability assessment provides are appreciated by companies, investors and analysts because it provides a more nuanced view of a company's sustainability performance. In addition, it is seen as a way to make progression visible and to identify companies that are in a transition to becoming more sustainable:

Shadings are good! Otherwise, it is easy to become binary. Every improvement [a company does] have a positive effect [on the sustainable development], even light green is positive, we are moving in the right direction. Every prevented degree of global warming is positive. (Analyst 2)

The shadings are said to be able to help companies that are not already widely known as green companies to become more visible for investors and other stakeholders:

From an investors point-of-view, a dark green company is too late [to invest in]. That train has passed, for example Tesla and Vestas. Light green is more interesting for an investor, to catch companies that are on the rise. Companies that are transitioning, that are communicating they will be sustainable in a reasonable future. The EU Taxonomy will broaden the view of what that is [to be considered as] green, RO can also help with this. [The EU Taxonomy and RO] identifies companies that have not received enough attention for their sustainability work. (Investor 1)

However, analysts and investor still argue that it is difficult to understand the differences behind the shadings, which means that the effect of different outcomes in shading is limited and becomes an indication of a feeling for users rather than something quantifiable. Over time, as the users become more knowledgeable, the affect is expected to increase:

When the [real estate] sector and investors become more skilled, I believe the shadings will be interpreted in a better way. Then, maybe, the shadings will gain stronger significance. So far, it is rather if the company is green or not. (Analyst 1)

Sustainability as a journey of continuous learning and development

All interviewees agree that sustainability is an immature field that will develop, change and become more standardised over time. Just a few years ago, the attitude towards sustainability was completely different. One of the case companies explains they had

internal resistance a few years ago, whilst the sustainability strategy today is a completely natural part of the company's business. An analyst explains how companies' sustainability reporting increases, both in frequency and amount, and how sustainability plays a more significant role in company presentations. However, more information can also cause an abundance of fine words and ambitious visions, thus the analyst also wants to see quantified results, as well as progression and integration into the reporting, to enable follow-up and benchmarking.

As previously mentioned in this report, the lack of standardisation in sustainability reporting methods is further emphasised by the interviewees of this study. Different actors are focusing on completely different areas and measures, which creates confusion and makes it difficult for analysts, investors and companies to understand what that is important:

We experience that the biggest frustration with ESG [ratings], is all the different methods used for assessing company's sustainability [performance]. Some companies score very high with one player [ESG rating provider], but very low with another. How should I be able to use these [ratings] as guidelines? If you focus too much on these [ESG ratings], you will end up doing weird things.. (Investor 5)

The EU Taxonomy is raised as a promising initiative but currently surrounded by much confusion and under constant change. However, the perceived turbulence is expected to calm down and end up in generally accepted standards, similar to the situation for financial reporting today, with accepted standards, subject to continuous improvements over time:

It [sustainability reporting standards] can certainly get messy, in a short-term, with regulations [EU Taxonomy] that are vague, that no one understands or agree with. In the end, it [the uncertainty] will be managed by Mr.Market. Rational investors make rational decisions. (Analyst 4)

Parallels are also drawn to the development of the green bond market, which was an immature market just a few years ago, but which now is considered as a developed and relatively accepted market standard. The immature characteristics of sustainability are further reflected in the Sustainability assessment process, explained by RO as following:

This [Sustainability Assessment] is a new product, it is not a streamlined process yet. Green bonds [product] is more standardised, a more mature market, the capital market is much more used to that [green bonds] process. Sustainability assessments are completely new, it [the process] is much more back and forth. (RO)

In addition, it becomes clear in the empirical material that knowledge about sustainability differs significantly between different actors. Due to the rapid changes in the EU Taxonomy, some investors and analysts explain that they have decided to wait to learn more, in anticipation of clearer guidance. However, as knowledge of climate change and

the Paris Agreement⁴ increases, investor pressure on companies to report and perform in sustainable development intensifies.

No, I have to admit, I am not that familiar with the EU Taxonomy yet. It changes all the time, why should I spend all my time learning it to a 100% if it is going to change. (Investor 2)

The use of a Sustainability assessment

The knowledge and use of a Sustainability assessment differ between the interviewed potential users (institutional investors and analysts). Some have never heard of the assessment while others have examined the assessment on the surface but not used it in detail. Some of the interviewees have been in contact with RO through its strong presence in the green bond market but have not yet used the Sustainability assessment due to its limited number of cases. As previously mentioned, it seems difficult for investors and analysts to navigate among the myriad of available ESG tools and thus difficult to evaluate the Sustainability assessment.

I have not developed any deeper understanding of their [RO's] methodology. RO has become some kind of benchmark in the market, they are to some extent trusted. Similar to S&P or Moody's for classic credit rating. They [RO] have a strong name in the Nordics, you trust them. (Analyst 1)

The interviewees explain that the good results from the assessed companies so far were not surprising, and that they already know that these companies are performing well in terms of sustainability. This finding indicates a risk of selection bias, that companies that expect to get a good result from an assessment participate in this voluntary process, while less sustainable companies would not participate. Against this background, the assessment is considered less useful because it does not contribute new knowledge to users. However, some investors appreciate RO's comments on the companies' goals in relation the Paris Agreement and global warming. In addition, the information is considered to be presented in a condensed way and can also increase the possibility of comparability between different companies.

However, one analyst is critical to the assessment and argues that the companies' actual sustainability performance is not improved by reporting, and questions whether reporting is something that companies should spend money on.

You can question whether it is correct and reasonable to spend large amounts of money on different types of [sustainability] certifications or ratings. Really, what is the value for the shareholders? It is rather better to just perform well, without showing it and without spending a large amount of money on a rating saying what you have performed. (Analyst 3)

In contrast, another investor claims that reporting (at least in situations where it is possible to quantify) usually motivates companies to improve their results as it becomes visible

⁴ The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties in Paris 2015 and entered into force in 2016. (United Nations Climate Change, n.d.)

how they are performing in contrast to last year and compared to peers, which is also supported by the interviewed companies in this study.

It is desirable to quantify things. As soon as you do that [quantify sustainability performance], companies want to compare the figures with last year's [figures], to previous periods, striving to improve them. [Quantification] enhance improvement. When it is possible to quantify, we are very much in favour for it, but it is not possible [to quantify] in all dimensions. We quantify if we can, we strive for that. (Investor 6)

Another investor criticises the timing of the Sustainability assessment, launching before the final version of the EU Taxonomy is released. This can cause problems if there is a discrepancy between RO's definition of sustainable and the EU Taxonomy's definition of sustainable, thus contributing to further confusion. At the same time, the investor appreciates that RO can help companies to report in accordance with the EU Taxonomy as well as provide guiding to how the vague guidelines are to be interpreted:

I am surprised, the timing is weird when we have the EU Taxonomy to launch, which will provide definitions of what that is to be classified as green or not. And will be the number one source to what that should be classified as environmentally sustainable. At the end of the day, it is the companies that will have to produce these [sustainability] figures, it is good if RO can help them with this process. However, it's problematic that they [RO] have their own shading, if it's a mismatch with the EU Taxonomy. It [shadings] creates confusion. I am in general positive to it [the Sustainability assessment], it can help us to classify something as green. (Investor 1)

The majority of the interviewed investors and analysts agree that it is easy to identify the "greenest" and "brownest" companies, while it is difficult to segment the companies in between them. The "greenest" companies are considered to have characteristics such as a high degree of transparency, high quality sustainability reporting, track record of sustainability performance, a high proportion of green financing as well as sustainability certified buildings. A majority of the respondents also have a harmonised picture of who the "greenest" real estate companies are, except for one research analyst who claims the exact opposite:

From that perspective, without being able to prove it, I believe the brownest real estate company I cover is Company X⁵. Their [Company X's] strategy seem to be to demolish buildings from the 1980s and construct new modern buildings... which [construction] causes the largest carbon emissions... At the same time, Company X is considered best in class in the [sustainability] screenings that are done. They [Company X] have the highest proportion of sustainability certified properties, the highest proportion of green leases, the highest proportion of green financing... I think that says something about how underdeveloped the ESG methodology is. (Analyst 3)

Another exception is an analyst who argues that it is easier to recognise the less sustainable companies, while the definition of green is much more complex and depends

⁵ Anonymised due to confidential information.

on definitions of sustainability. The EU Taxonomy aims to address this problem and is expected to have some kind of effect according to the analyst:

It [which company that is green or brown] depends, it is easier to say which company that is the least green. You must clearly define what green means. For example [a company with] low energy consumption, but how to they score on biodiversity? The EU Taxonomy is trying to define this, which may affect how this [sustainability] is viewed in the future. (Analyst 2)

Similarly, one investor criticises the term “green” and prefers to use the term “sustainability” to involve a broader perspective of a sustainable development. Furthermore, the investor explains that it is impossible to use one single definition of sustainability and that the complexity of sustainability requires an assessment of what is material for the specific company in its context:

I have a hard time with the definition “green”, I would rather say a company is sustainable in the sense it [the company] will survive during my investment horizon. Again, you need to understand what that is material [for the company]. It could be climate factors, it could be something else, which makes the business model not strong enough to adapt [to survive], then you have to do a risk assessment. There is no uniform answer [to which company that is the greenest or brownest], you have to look at each specific company and put them in your own context, as well into a wider context of possible events. If it is technology development, consumer preferences, different reporting requirements etc.. Can the company live up to these? What risks are the company facing, does the management have the capabilities to run it [the company]? (Investor 4)

Two other investors agree and claim that a great responsibility lies with the specific investor, who needs to know each company well in order to be able to assess it in the light of its context:

There are no excuses, it’s about you ultimately understanding the company and what it de facto does. It is really about doing a life cycle analysis of their products. It [life cycle analysis] is done to a very limited extent [by companies] today, however, it is coming. (Investor 6)

The quotes from Investor 6, Analyst 2 and the investors above explain a more problematic process for identifying the “greenest” real estate companies according to these individuals. For them, “being green” is not only a question of, for example, the proportion of sustainability certified buildings or green financing, they explain a wider and more complex picture of sustainability. A reason for the different views of a “green” real estate company seems to be related to different levels of knowledge about sustainability, visible through compartmentalisation between sustainability and daily operations within the interviewed investors and research analysts’ organisations. Another indication of compartmentalisation is that sustainability often is discussed on separate pages in research analysis reports, or when sustainability information is packaged as a separate product, rather than integrated as a part of the traditional financial analysis.

The integration of sustainability in the financial analysis is said to have improved in recent years, but as an investor emphasises “*there is definitely still room for improvement*” (Investor 4). The same investor also raises the importance of presenting sustainability information in an understandable way, both from a company and user perspective, which is considered as challenging with available sustainability information today. This opinion is also emphasised by an analyst:

Our job is to sort, there is so much available information within sustainability. Who should you trust? Gresp, RO? Or can the EU Taxonomy solve this? The difficult thing is not to find information, the difficult thing is to know what [sustainability information] that is rubbish and what that is worth looking into... Which just makes it harder [to assess a company’s sustainability performance]. The more focus there is on something, the more information there will be, both good and bad. [Always an uncertainty] whether you have wasted 10 minutes on reading or if you actually got anything from it. (Analyst 5)

Conclusion – The third stage: Extraction of results

The empirical material emphasises that the Sustainability assessment and its shadings provides a more transparent and nuanced picture of a company’s sustainability performance, theorised by the authors as broadening the users “full picture” (Hines, 1988), by providing insight to which companies that are transitioning or already well-performing. This is contrary to the EU Taxonomy, which is perceived as binary. Further, the Sustainability assessment’s transparency is argued as an enabler for users to analyse and follow up on the used methodology. The frequency of reporting is also perceived as important among the interviewees. The case companies emphasise that a high frequency helps their sustainability efforts and performance to gain attention in the market and helps them to be perceived as sustainable. Investors in general and analyst in particular prefer a high frequency of transparent reporting in order to enable trend analysis and benchmarking, and thus be useful in investment decisions. Similarly, when analysing with findings from (Miller, 2001), an increased frequency of sustainability reporting would increase the visibility of the case companies’ sustainability efforts and performance. One investor however highlights the risk of short-term behaviour when adapting to frequent reporting, that it could be counterproductive to the overall purpose, that is, to decrease the environmental footprint, as sustainability tend to require a more long-term focus.

The interviewees collectively argue that the area of sustainability is a new and fast-moving area which lately has become a natural part of many companies’ strategies. The Sustainability assessment is perceived as a possible improvement to the wide variety of sustainability reporting standards and a way to increase the amount of quantitative information with connection to financial data. The immature, early-stage nature of sustainability reporting, together with the upcoming, ever-changing and confusing, EU Taxonomy, is interpreted by the authors as indications of a “hot situation” (Callon, 1998).

The empirical material also indicates different views on the additional reporting provided by the Sustainability assessment, which to some extent challenges Callon's (1998) and Miller's (2001) statements about the power of quantification. Some respondents claim that increased reporting does not in itself lead to improved sustainability performance but rather entails a risk of excessive narratives and high visions. While other respondents argue in line with Callon (1998) and Miller (2001), that more reporting (at least if provided in a quantitative form) leads to improved results, since it becomes visible, both from a company and user perspective, how the company is performing compared to peers and previous reporting periods, which will trigger the company to improve. Again, this indicates the importance of frequency of reporting and balance between qualitative and quantitative information, for sustainability reporting to become useful for thought and action.

Furthermore, the interviews indicate different opinions on how to identify the "greenest" real estate companies, which also supports the authors' interpretation that sustainability reporting is a "hot situation" (Callon, 1998). Some investors and an analyst provide a more complex view of defining the greenest companies, which in turn can be linked to their broader view of sustainability, theorised by the authors as a broader "full picture" (Hines, 1988). The variations in "full picture" (Hines, 1988) among the interviewees may be explained by different levels of knowledge, which strengthens the importance of presenting sustainability information in an understandable way, both from a company and user perspective. This finding indicates a need, for companies that aim to create an account of their sustainability performance, to also consider the user perspective when addressing the three questions from Callon & Law's (2005) "*Three stages of calculation*". If the user perspective is omitted, there is a risk that the presented sustainability performance does not lead to the intended framing and thus absence of the desired actions for a sustainable development.

4.2.1. Problems with the EU Taxonomy regulation

Local classification of buildings

An EU Taxonomy problem that is frequently mentioned in the interviews is the dependence on local energy classifications for buildings across Europe. Countries in Northern Europe are said to have tougher energy classification requirements compared to other European countries. The implication is an unfair treatment of Nordic real estate companies, which will find it more difficult to classify their buildings as "EU Taxonomy green" even if energy use is lower than a building in Southern Europe.

Another thing [with the EU Taxonomy] that is completely sick... we have a different regulation in the Netherlands or Spain, compared to the Nordics... So European fund managers should look at the same sector, but with different criteria, but present one type of ranking towards customers [fund investors]. It is obvious that this method is developed by someone far away from the market. It is also colder in

the Nordics.. then investors compare with Spain and say the Nordic real estate companies should be more energy efficient.. because it never snows in Spain. That is a thing when you look at an EU level.. You partly also need to have a national perspective. So, it's not easy [to develop sustainability reporting standards], I do not know myself how to design something like that. One thing is for sure, it [the EU Taxonomy] has shortcomings as it looks now. (Analyst 5)

These inequalities across Europe are feared by interviewed companies and analysts to affect the ability of Nordic real estate companies to finance themselves due to the investment criteria of certain investors, who only allow investments in green assets.

These [inequalities] means that investors can't buy bonds from Company 2 but they can buy bonds from a Dutch company where they seem to have not as hard requirements. This makes you think.. what is the actual benefit of this [the EU Taxonomy]? This was not really what you were looking for [with the EU Taxonomy]. (Analyst 1)

Carbon emission measurement

The interviewed analysts and investors note that which sustainability parameters to assess depends on company and sector. However, all interviewees emphasise the importance of understanding a company's carbon emission footprint, both on a direct and indirect basis. An experienced problem among the interviewees is an absent focus on indirect emissions in the EU Taxonomy draft, creating confusion in the market. The draft justifies counterproductive actions, from a sustainability perspective, by incentivising companies to demolish old buildings and replace with new, more energy efficient, ones. Thus, neglecting the emission footprint from the construction process, which in turn is the single largest contributor to carbon emissions in the real estate sector according to the interviewees:

I hope it [the EU Taxonomy] will change. For example, it does not consider the construction process as it looks now. If you are to report aligned with the EU Taxonomy, from what I have seen so far, it is better to build new houses with strong energy efficiency rather than to renovate and improve an old house. We [Company 2] are of the completely opposite opinion. The most environmentally friendly house is the house that never was built. The next best thing is not to demolish and build new, it is rather to work with existing properties, invest time and energy in getting them in an as good condition as possible. (Company 2)

The interviewees emphasise that a potential result from neglecting indirect emissions is that construction focused real estate companies will gain an advantage in capital markets over companies focusing on improving legacy buildings. As such, there is a risk for counterproductive actions, exemplified by the interviewees, that capital is misallocated to companies with high sustainability scoring due to investors belief of strong sustainability performance, even though the actual carbon emission footprint is larger. An investor argues that it is more important from a sustainability perspective to own and develop companies, and to push for improvements, instead of solely focusing on

companies already perceived as sustainable. The investor further developed that the neglect of carbon emissions in the EU Taxonomy and ESG ratings might lead to that companies and investors neglect the whole EU Taxonomy, as its conclusions are interpreted as wrong:

If many people think that it [The EU Taxonomy] concludes strange things, there is a risk that it will never be used. Instead, investors will continue to stick to other evaluations, or do their own. (Investor 2)

Another investor highlights that it is, in several sectors, hard to measure indirect emissions, which might be an explanation to its absence in the EU Taxonomy. Further, an analyst explains the challenge in developing regulations:

Isn't that the reason, when setting rules, that someone will get stuck somewhere? No matter how smart the regulators are, it is not possible to make everything perfect and conflict free. It can not be done perfectly, it will never be. You have to do it as best you can. (Analyst 6)

Conclusion – Problems with the EU Taxonomy regulation

To conclude, the empirical material indicates that it is difficult to develop regulations, since the attempt to improve one thing probably generates problems at the other end instead. On the one hand, the empirical material problematises the use of local thresholds as a part of a common regulation for capital allocation across countries. While on the other hand, the material also highlights the need for local adaptations due to different local conditions. Moreover, the interviewees explain the need of simplifying sustainability and make it more standardised, which the EU Taxonomy attempts to do, and which is also the idea of framing, as explained by Callon (1998). Including certain things and excluding other things helps actors to see a type of reality and judge possible actions (Callon, 1998). However, the potential risk of oversimplification is counterproductive actions, for example the unintentional incentives to demolish old buildings and replace with new, and thereby contributing to significantly higher carbon emissions, as well as allocations of capital to companies interpreted as more sustainable than they are.

5. Discussion

In the following section, the authors will discuss and analyse the findings presented in section 4 by connecting them to previous literature. This section is divided in three parts. First, findings related to sustainability reporting, its problems and paradoxes, will be discussed. Second, findings related to how corporations strive to construct an account for their sustainability performance will be discussed. Lastly, the found implications for accounting for sustainable development will be discussed.

5.1.1. The paradox of sustainability reporting – too much but at the same time a desire for more

The interviewed investors argue similar to what RO learned in their initial study, that sustainability aligned companies have a higher probability of surviving in the long run, and, as such, imply lower risk, similar to previous literature (Ferrell et al., 2016; Gray, 2006; Malik, 2015; Walter, 2020). Also, the empirical material identifies a lack of consistency and transparency in the ESG rating providers methods, similar to what previous research also noted (Bebbington & Larrinaga, 2014; Burritt & Schaltegger, 2010; Christensen et al., 2019; Walter, 2020). The empirics further argues that the myriad of inconsistent standards and initiatives in the market makes it hard to compare the companies in a holistic way, in line with findings by previous literature (Huber & Comstock, 2017; Lozano, 2020; Malik, 2015; Ny, 2009). Similar findings are also presented by Walter (2020), Kotsantonis & Serafeim (2019), and Amel-Zadeh & Serafeim (2018), who highlight that lack of transparency and inconsistency in methods act as fuel to the lack of comparability, timeliness and reliability of sustainability reporting, as well as increasing the divergence across rating agencies. However, while the empirical material expresses its dissatisfaction with the non-comparable, non-transparent and confusing myriad of sustainability reporting standards to choose between, they still urge for more. New methods are being developed, in hope of solving these problems, increasing the myriad to choose between and making it even harder for the companies to evaluate which method that best reflect their sustainability performance. As such, this study finds that dissatisfaction is a driver for the development of sustainability reporting. Furthermore, whilst standardisation is requested, to enable comparability and reduce confusion, there is also a need for customisation. The empirical material emphasises the importance of bottom-up approaches in order for sustainability-related assessments to be reliable and thus enable thought and action. This finding presents a trade-off between standardisation on the one hand and customisation on the other hand, indicting a need for balance between these two extremes in the development of sustainability reporting.

5.1.2. How corporations construct an account of their sustainability performance

Through the analysis of the three case companies in this study, the authors find that the companies hire RO to get support in making their sustainability performance calculable and on how they should report their EU Taxonomy alignment. As argued by Callon and Law (2005), it is necessary to go through three stages (*“Three stages of calculation”*) in order to reach calculability, which in turn is required to achieve a common frame and help actors to judge possible actions, and further enable both companies and investors to contribute to sustainable development. Through the analysis, the authors examine how the companies, with support of RO, go through *“The three stages of calculation”* (Callon & Law, 2005) as part of the Sustainability assessment process with the following findings.

The first stage - Detachment and layout in a single space

First, a decision about what entities are to be brought within the framed space have to be made and therefore what kind of sustainability data that are to be included within the space. The empirical material declares that the data collection process to construct an account for sustainability performance is fairly easy for real estate companies. This due to the indicators used in the Sustainability assessment are mainly collected from data that already been collected by the case companies for real estates' sustainability certification purposes. The easiness in collecting data is contrary to Sobkowiak et al. (2020), who describe the data collection as problematic, indicating that industry characteristics and context influences how to create an account, which also Callon & Law (2005) points out (see Appendix 3a). Sustainability reporting therefor seems to be less “hot” (Callon, 1998) in the real estate industry, due to the common view of what constitutes sustainability data. As a reminder, “hot situations” are characterised by a significant number of controversies, a lack of stable knowledge and ways of measuring, and thus make it particularly difficult to find a common frame (Callon, 1998). The authors of this study conclude that the common view of what data to be used should improve the possibilities for achieving a common frame for sustainability performance within this sector. However, similar to findings by Sobkowiak et al. (2020), RO and the case companies are not able to collect all the data they would like but demonstrate awareness of these limitations and explain an intention to improve this and thus the relevance of quality of the indicators.

The data collection process is described by RO and the case companies as an iterative process connecting financial and sustainability data which increase collaboration and understanding between the different departments within the companies, and, as such, make sustainability connected to daily operations and strategy. This finding contradicts previous literature (Lozano et al., 2016; Schaltegger & Wagner, 2006), who found that sustainability reporting often is developed by one designated department, and, as such, lack connection to the rest of the company. Similarly, an interviewed senior institutional investor had seen the same, compartmentalisation phenomenon, in several companies and emphasises the importance of including sustainability management in the top

management group in order to integrate sustainability into operations and strategy. However, only one of the interviewed case companies includes sustainability management in the top management group, further indicating the Sustainability assessment process act as a bridge and connects the departments despite sustainability management being excluded from top management.

Lastly, RO's method is perceived as applicable and comparable between different types of companies and sectors, mitigating a problem described by RO and that the EU Taxonomy attempts to solve (PWC, 2021). Further mentioned by previous literature (Adams & McNicholas, 2007; Huber & Comstock, 2017; Malik, 2015), that sustainability information is hard to standardise and compare due to a wide variety of definitions, approaches and conclusions among different sustainability reporting methodologies.

Conclusion: The first stage – Detachment and layout in a single space

First, the findings in this study indicate that not only a company itself, but also industry have effect on how to construct an account (see Appendix 3a). Second, the underlying data to construct an account is, in the context of companies, provided by the companies being assessed, contrary to Sobkowiak et al. (2020), where it is prematurely NGOs providing the underlying data of the UK government's performance (see Appendix 3a). This finding indicates that companies seeking to construct an account of their sustainability performance have power to influence what data to be assessed and thus what to be included in the company's "full picture" (Hines, 1988). This finding further supports the phenomenon described by Cho et al. (2015), that corporations can highlight positive impacts and omit negative impacts in their sustainability reports. Third, this study supports Sobkowiak et al. (2020) in terms of that both the UK government and the examined case companies express a lack of sufficient data and, thus, that the produced Sustainability assessment becomes too narrow. Fourth, this study contributes with contrary findings to previous research by Lozano et al. (2016) and Schaltegger & Wagner (2006), that sustainability reporting often is designated by one department and that sustainability thus is disconnected from the company's strategy and operations. In contrary, this study finds that by connecting financial and sustainability data, compartmentalisation is reduced, and sustainability becomes a natural part of strategy and daily operations.

The second stage – Transformation and manipulation

The empirical findings to the second stage of the *Three stages of calculation* (Callon & Law, 2005) indicate, similar to the findings of Sobkowiak et al. (2020), a need for collaboration between different actors (a socio-technical arrangement), to transform and manipulate the sustainability data into useful indicators, further supported by previous literature (Bebbington & Larrinaga, 2014; Callon, 1998). Both Sobkowiak et al.'s (2020) case, in the context of the UK government, and this study's case, in the context of corporations, develop indicators in an iterative process. In this study the development was

a part of RO's research through involvement from both companies and investors. However, to the contrary, the empirical material finds that also the process of combining data into indicators was iterative, between RO and each case company. This gives the assessed company power in how data is to be interpreted, whilst this process was carried out by one party in Sobkowiak et al. (2020) (see Appendix 3b).

Finding the proper link between the financial and sustainability data is mentioned by RO as a main challenge in developing the assessment, which is further supported by previous research as a main challenge with sustainability reporting in general (Unerman et al., 2018). At the same time, this challenge is the problem that the Sustainability assessment aims to address and the pressure that the EU Taxonomy is intended to create. The empirical material also problematises attempts to, at any price, quantify sustainability performance due to the risk of counterproductivity it may cause. An example from the empirics indicates that quantity is not always greater than quality in the context of sustainability. Unerman et al. (2018) argue in a similar way and emphasise the need for qualitative information to put sustainability data in context and thereby add value, something that a Sustainability assessment is said to deliver according to the interviewed users. However, the "full picture" (Hines, 1988) that the current version of the assessment provides is considered as too narrow by several of the interviewees. The risk of a narrow "full picture" (Hines, 1988) caused by a narrow ESG rating is further discussed by Walter (2020) and Unerman et al. (2018), who emphasise that actors tend to see these ratings as the sole truth of reality and take action based on that "reality". The empirical material stresses that a potential consequence is counterproductive actions, such as i) that companies are interpreted as more sustainable than they are and therefore less compelled to strive for improvements, ii) that capital are allocated to companies interpreted as more sustainable than they are, and iii) to provide unintentional incentives to demolish old buildings and replace with new, and thereby contributing to significantly higher carbon emissions than if the building would have been improved by renovations.

Sobkowiak et al. (2020) emphasise in their case the importance of "The Code Practice", which means that the transformation process from data points to indicators must follow the UK government's statistical code practice, in order to translate the many biodiversity data points into a single account and enable the government to make sense of the information. With regards to the study of this report, RO's methodology seems to play a similar role, with a high legitimacy in the market enabling calculability. Further, the case companies' attempts to influence the results of the EU Taxonomy are similar to the impact of the British politicians on the indicators through the steering group (Sobkowiak et al., 2020). Further, in line with the findings of Unerman et al. (2018), the empirical material emphasises that the case companies would like to adapt to the new regulation in advance to support their image as sustainable companies.

Conclusion: The second stage – Transformation and manipulation

First, this study confirms the need for socio-technical arrangements in order to transform and manipulate sustainability data into useful measurements (Bebbington & Larrinaga, 2014; Callon, 1998; Sobkowiak et al., 2020). Second, this study finds that the process of combining data into indicators was iterative, thus giving the assessed company power in how data is to be interpreted, contrary to Sobkowiak et al. (2020) (Appendix 3b). This finding adds further nuances to how transformation and manipulation of data can take place when changing the context to a company. Third, similar to Sobkowiak et al. (2020), this study found, in the context of companies, that company executives try to affect external forces, such as the EU Taxonomy, deciding on indicators for sustainability performance. Fourth, our study supports Sobkowiak et al. (2020), that calculability will only be successful if the underlying process is considered as credible and legitimate. Last, this study both supports and contributes to findings by Unerman et al. (2018), that finding a proper link between financial and sustainability data is a main challenge with sustainability reporting, which is present in this study as well. However, the study contributes to the previous literature by adding findings from integrations perceived as successful and thus provide valuable insights in how a company can create financially attached sustainability reports.

The third stage – Extraction of results

In the third stage of the *Three stages of calculation* (Callon & Law, 2005), the results of the calculation processes are extracted. For the case companies' sustainability performance, this means that RO decides how measurements of sustainability performance will be reported as a set of indicators, similar to Sobkowiak et al. (2020). When the result is extracted, it will not be changed unless performing a new Sustainability assessment, in order for RO to maintain its legitimacy. Thus, as previously mentioned, this study contributes with findings supporting Sobkowiak et al.'s (2020) speculation, that a credible and legitimate process is required for companies in order to construct an account of their sustainability performance. Further, all interviewees expect the extracted result will be improved continuously, to for example also cover indirect carbon emissions. The interviewees simultaneously emphasise that it is difficult to extract such information today, due to lack of methods and resources, but acknowledge their ambition to develop enabling extraction processes. This continual process of refinement was also visible in Sobkowiak et al. (2020). In the context of this study, this indicate that achievement of calculability for sustainability performance is temporary and ongoing. The extracted results level of alignment with users "full picture" (Hines, 1988) of sustainability will thus impact possible thought and action for sustainable development.

Similar to Miller (2001), the empirical material emphasises the importance of frequent sustainability reporting, in order for sustainability efforts and performance to get traction and thus gain attention from stakeholders, including the capital markets. Further, a

frequent sustainability reporting is seen by the interviewees to strengthen the perception of a company's image as sustainability aligned. These findings contribute to Unerman et al. (2018), that companies not only seek to strengthen their sustainability image by reporting in advance to new regulations, but also by reporting in a more frequent pattern. The importance of frequency indicates that not only the design is to consider, when construction an account of sustainability performance. However, the empirical material also highlights risks with adapting to frequent reporting, such as short-term behaviours that could be counterproductive to the overall purpose, that is to decrease the environmental footprint, as sustainability tend to require a more long-term focus. The finding thus reflects a trade-off, where frequency of sustainability reporting must be balanced with the long-term overall purpose.

The empirical material argues that it is difficult to understand the differences between RO's shadings, indicating the effect of different outcomes in shading is limited. In line with previous research (Bebbington & Larrinaga, 2014; Callon, 1998; Cederberg, 2019; Eccles & Serafeim, 2013; Sobkowiak et al., 2020; Solomon & Solomon, 2006) which claim that sustainability is a continuous learning process that will develop over time, the interviewees expect that the importance of shadings will increase, as the users become more knowledgeable about the tool and sustainability in general.

Extension of the third stage through a user perspective

As a part of the third stage, extraction of results, Sobkowiak et al. (2020) suggest that organisations, in the context of corporations, need to enable feedback from both external and internal stakeholders in order to construct an account for sustainability performance. Collaboration between the company and stakeholders is expected to continuously improve the calculability of the company's sustainability performance as they form part of the socio-technical arrangement that creates the frame for what sustainable is (Sobkowiak et al., 2020). Therefore, this study also includes a user perspective as a part of the analysis.

The homogeneity of the assessed companies indicates a selection bias, that is also supported by Cho et al. (2015) who argue that companies tend to report positive events and neglect negative events. This finding shows that companies that expect to get a good result from the Sustainability assessment participate in this voluntary process, while less sustainable companies might not participate. Against this background, the assessment is considered less useful because it does not contribute new knowledge to users. This finding implies that mandatory regulations on sustainability reporting is a requisite to mitigate selection bias, to increase and improve sustainability reporting from less sustainable companies.

The empirical material questions whether companies should spend money on initiatives such as Sustainability assessments and argues that the actual sustainability performance is not improved by reporting, the latter also supported by previous literature (Bebbington

& Larrinaga, 2014; Cho et al., 2015; Gray, 2006; O'Dochartaigh, 2019; Walter, 2020). Instead, that such initiatives entail risk of excessive narratives. However, some interviewees claim that reporting (at least in situations where it is possible to quantify) usually motivates companies to improve their results as it becomes visible how they are performing in contrast to last year and compared to peers, which is also supported by previous literature (Callon, 1998; Miller, 2001). Again, this indicates the importance of frequency of reporting and balance between qualitative and quantitative information, in order for sustainability reporting to become useful for thought and action.

The empirical material indicates that a common frame for what is to be classified as a green real estate company has not yet been achieved. Some investors and analysts have a common view and identify characteristics such as a high degree of transparency, high quality sustainability reporting, track record of sustainability performance, a high proportion of green financing and sustainability certified buildings, aligned with previous research (Ferrell et al., 2016; Gray, 2006; Malik, 2015). However, some interviewed investors and analysts declare a different and more complex view, that sustainability requires an assessment of what that is material for the specific company in its context. This is similar to the argumentation of Unerman et al. (2018) and further supports the findings in section 5.1.1., the paradox of sustainability reporting. The variations in “full picture” (Hines, 1988) among the interviewees may be explained by different levels of knowledge, which strengthens the importance of presenting sustainability information in an understandable way, both from a company and user perspective. This finding indicates a need, for companies that aim to create an account of their sustainability performance, to also consider the user perspective when addressing the three questions from Callon & Law's (2005) “*Three stages of calculation*” (see Appendix 3c). If the user perspective is omitted, there is a risk that the presented sustainability performance does not lead to the intended framing and thus absence of the desired actions for a sustainable development. The contractions regarding the definition of a green real estate company and continuous development in knowledge, and methods for measuring, also supports the authors interpretation that sustainability reporting is a “hot situation” (Callon, 1998).

Conclusion: The third stage – Extraction of results

In this study, RO decides how the sustainability performance should be reported and when the final result is extracted, its unchangeable. This is in order for RO to maintain its credibility, further aligned with Sobkowiak et al.'s (2020) argument that a credible and legitimate method is required to construct an account of sustainability performance.

Further, the findings support previous literatures' conclusions (Bebbington & Larrinaga, 2014; Callon, 1998; Cederberg, 2019; Eccles & Serafeim, 2013; Sobkowiak et al., 2020; Solomon & Solomon, 2006), that sustainability reporting is a continuous learning process, that the calculability will be improved over time and that a continuous reframing will take place. However, this study enhances the user perspective, which Sobkowiak et al. (2020)

suggest is necessary when creating an account from a company perspective, as the external feedback is expected to play a more important role in improving how the account should be created. This study finds that users' perception of the results can affect ability to contribute to sustainable development, and thus imply risk for counterproductive actions. As such, this study contributes to Sobkowiak et al. (2020) with the finding that the corporate perspective requires an extended work in the third stage of calculation (see Appendix 3c).

As mentioned in stage one, lack of sufficient data is expressed as a problem. In addition, this study also supports Sobkowiak et al.'s (2020) findings with regards to the desire of improving the data and thus the indicators used in the process of constructing an account for sustainability performance. As such, this study finds that an intense pressure for change (that is, in the *Continuous change (through)* in Appendix 3c) is a potential indicator for a "hot situation" (Callon, 1998).

Sobkowiak et al.'s (2020) aim of indicators is to i) provide evidence base to inform internal policy, and ii) to provide "objective" figures about the state of UK biodiversity. This is contrary to this study, in the context of companies, where the aim of indicators is to i) evaluate EU Taxonomy alignment, and ii) to provide "objective" and financially linked figures about the real estate company's sustainability performance (see Appendix 3c). The discrepancy between the context of a government and the context of a corporation shows that the aim of creating indicators differs between organisations and, as such, must be considered in the process of constructing an account.

5.1.3. Implications for accounting for sustainable development

Sobkowiak et al. (2020) problematise the use of globally defined indicators, in order to follow up on the global SDGs, by arguing that locally adapted indicators are necessary for companies to be able to contribute to sustainable development. Instead of relying on top-down standards, such as GRI, Sobkowiak et al. (2020) advocate adaption to the circumstances of the specific company through the development of a bottom-up approach. The bottom-up approach that Sobkowiak et al. (2020) suggest, is said to require extensive framing work through the three stages of calculation, to achieve a meaningful account of the company's sustainability performance. Moreover, this calculation process is expected to require significant investments and use of resources (Sobkowiak et al., 2020). Through the study of this report, the Sustainability assessment is considered to be representative for the bottom-up approach that Sobkowiak et al. (2020) propose, using an adapted method for each company, to consider the specific context in each individual case. This is in contrast to other ESG ratings, which are criticised in the empirical material of this report. In addition, RO with its legitimacy and extensive knowledge may also be able to support with recourses that companies, according to Sobkowiak et al. (2020), will need to undergo this calculation process. In addition, a clear procedure for transforming and manipulating the numbers is said to be important in ensuring that the measures are

considered credible and legitimate, such as the UK government's Code of practice (Sobkowiak et al., 2020). The legitimate role of RO and its methodology can serve as additional examples possibly playing similar roles as the Code of practice.

However, the problem of local energy classifications, as mentioned in the empirical material, raises a potential drawback with the locally adopted indicators that Sobkowiak et al. (2020) proposes. The empirical material argues that access to funding from the global capital market is partly based on sustainability performance, which in context of local energy classifications imply increased allocation of funding towards companies operating in less strict areas. However, it does not seem to be as simple as going directly for global indicators since the empirical material also, similar to Sobkowiak et al. (2020), emphasises the differences in local conditions (such as weather conditions). As such, local conditions require consideration when determining indicators when constructing an account for sustainability performance. In addition, this study contributes to Sobkowiak et al.'s (2020) findings, by demonstrating how complex the determination of common indicators is. Thus, implies specific considerations with respects to different SDGs and different types of organisations, such as governments versus corporations, when constructing an account of sustainability performance.

In addition, the empirical material indicates that it is difficult to formulate a common standard, since the attempt to improve one thing probably generates problems at the other end instead. The intention to simplify sustainability reporting and make it more standardised is perceived as good, which the EU Taxonomy attempts to do, and which is also the idea of framing explained by Callon (1998). However, the potential risk of oversimplification is the consequence of counterproductive actions, for example the unintentional incentive, from the EU Taxonomy, to demolish old buildings and replace with new, and thereby contributing to significantly higher carbon emissions.

In summary, the Sustainability assessment and RO constitute examples of what Sobkowiak et al. (2020) consider necessary for a company to be able to construct an account of its sustainability performance and the study thus confirms Sobkowiak et al. (2020) mentioned propositions. However, the study also shows that, despite a bottom-up approach, recourses and a legitimate methodology, it can take time to reach a common frame. This study finds that sustainability reporting is a "hot situation" (Callon, 1998) surrounded by several controversies, further exposed to continues learning and thus likely to continue to undergo major changes in the coming years.

6. Conclusion

In this section, the summarised contributions to previous literature are presented, followed by acknowledged limitations of the study as well as suggested ideas for future research.

6.1.1. Summarised contributions

To conclude, this study contributes with two main findings to the previous literature by Sobkowiak et al. (2020), thus, to previous literature on calculation for sustainability performance. Further, this study supports and contributes to previous literature on sustainability reporting in general.

First, this study finds that there are differences in how to construct an account of sustainability performance, depending on the type of organisation, type of industry and what type of SDG that is in focus. The study thus contributes with findings from the context of corporations to Sobkowiak et al.'s (2020) analysis and findings. For example, external feedback through a user perspective seems to be more important from a corporation perspective (versus government) and requires an extended work in the *third stage of calculation* (Callon & Law, 2005). Thus, this study finds that users' perception of the results can affect ability to contribute to a sustainable development, and instead imply risk for counterproductive actions. This finding confirms Sobkowiak et al.'s (2020) proposed need for a user dimension when constructing an account for sustainability performance in the context of corporations.

Second, this study contributes to Sobkowiak et al.'s (2020) problematisation of globally set indicators for global goals when constructing an account of sustainability performance, by finding that not only globally set but also locally defined indicators and thresholds can be problematic, at least in the context of corporations. This finding presents the complexity of determining common sustainability regulations and ambitions across countries.

Last, this study's findings support previous literature (Bebbington & Larrinaga, 2014; Callon, 1998; Cederberg, 2019; Eccles & Serafeim, 2013; Sobkowiak et al., 2020; Solomon & Solomon, 2006) that sustainability experience a tough challenge in finding a stable common frame, and that the situation is expected to become more cohesive over time as knowledge increases. As such, this study finds that sustainability reporting constitutes a "hot situation" (Callon, 1998).

6.1.2. Acknowledge limitations and suggested future research

The study of this report is subject to several potential limitations. First, the analysis and findings are affected by the authors' interpretations of the material. Second there is a risk

that the interviewees do not share the true picture of reality with the authors and try to present themselves and the represented organisation in a certain light. Third, the empirical material is likely to be affected by the case companies' prominent position in sustainability. A similar risk also applies for the interviewed investors and analysts, where individuals with greater interest in and knowledge of sustainability may be more likely to accept the interview request. Fourth, the study is based on the three Nordic real estate companies which means that the theoretical generalisations the authors try to make do not necessarily apply for companies in other contexts. This makes it interesting for future research to conduct similar studies based on other case companies and industry contexts to examine the strength of the theoretical generalisation. Fifth, the authors have examined how the companies construct accounts of their sustainability performance, and not whether the process actually leads to improved sustainable development. Hence, the authors suggest that future research investigate this further, after a certain period of time has elapsed to make it possible to see potential effects. Sixth, the limited time period for this study and the short time of the analysed tool's (the Sustainability assessment) existence, may have affected the findings of this study due to the limited number of cases available and limited knowledge about the tool. In addition, changes within the field of sustainability, the EU Taxonomy and the Sustainability assessment are expected to take place in the near future. The expected changes and more available cases make it relevant for future research to examine how companies' construct an account of their sustainability performance, both through qualitative and quantitative methods, to consider new implemented changes (to what that is to be considered as sustainable) and the impact that may have. Finally, a comprehensive view of the companies' experiences and opinions is not ensured, due to the few interviews per case company in this study, which enable the opportunity for future research to investigate the internal processes within the company in more detail.

7. Appendix

7.1. Appendix 1 – Interview templates

7.1.1. Appendix 1A - Interview template for companies

Introduction

- Background of the study and presentation of the researchers
- Can you please tell us about your professional background and your role in [the company]? What does a typical day look like?

Questions

- Why did [the company] decide to undergo a Sustainability assessment?
 - Who was the initiator?
 - Why? Driving forces?
- Does a Sustainability assessment create value for [the company]? What kind of value in that case?
- Was there any uncertainty about the decision to undergo a Sustainability assessment? Examples?
- Can you please tell us about the Sustainability assessment process?
 - Where there any specific challenges during the process? How did you handle these?
 - What is your impression of RO? Why?
- How has the Sustainability assessment affected you as a company, both internally and externally?
- How will [the company] follow up after the assessment?
 - Do you plan to undergo more Sustainability assessments in the future? Why?
- What potential opportunities and risks do you see with Sustainability assessments?
- How do you perceive the interest in Sustainability assessments in the future? What are potential driving forces?
- What is your opinion on the approaching EU Taxonomy?
 - What role did it play in the Sustainability assessment process?

- Do you have an idea of who the “greenest” real estate companies in the Nordic region is? What common features do these companies share?

7.1.2. Appendix 1B – Interview template for investors and analysts

Introduction

- Background of the study and presentation of the researchers
- Can you please tell us about your professional background and your role in [the company]? What does a typical day look like?
- Who are the primary users of your analysis? (For analysts only)

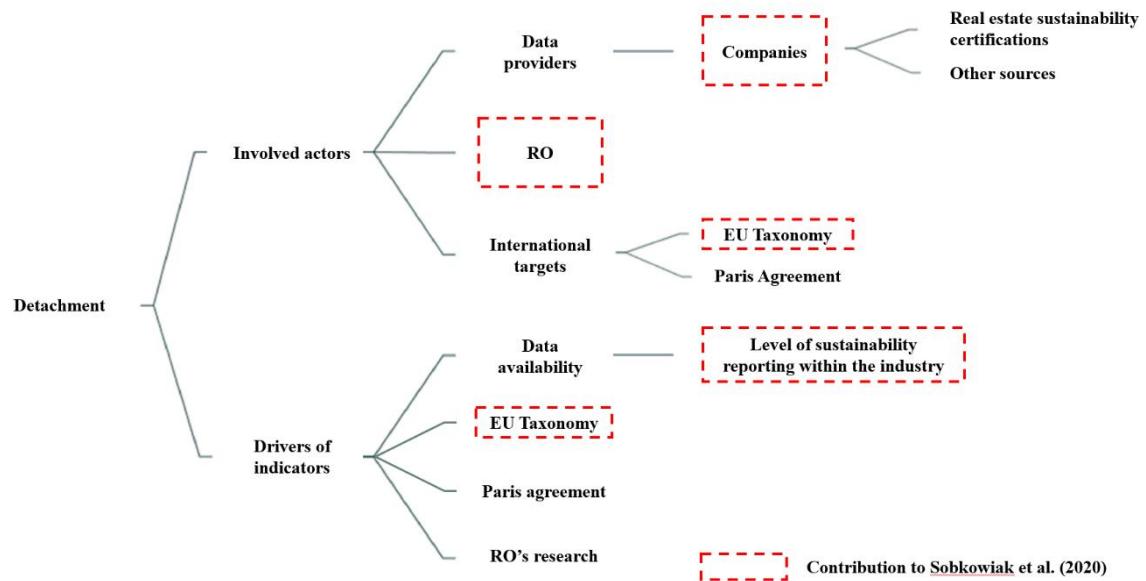
Questions

- What role does ESG play in your potential and current investments/ in your analyses? How do you use ESG information?
- What type of ESG information do you find valuable?
 - What is your opinion about the ESG information available?
 - How do you find the ESG information you need?
 - Do you prefer quantitative or qualitative ESG information? Why?
- Are you familiar with the Sustainability assessment?
 - Have you used the information? How?
 - Pros and Cons?
 - Do you perceive the information reliable? Why/Why not?
- How do you perceive the interest in Sustainable assessments? What are potential driving forces?
- What is your opinion on the approaching EU Taxonomy?
- Do you have an idea of who the “greenest” real estate companies in the Nordic region is? What common features do these companies share?

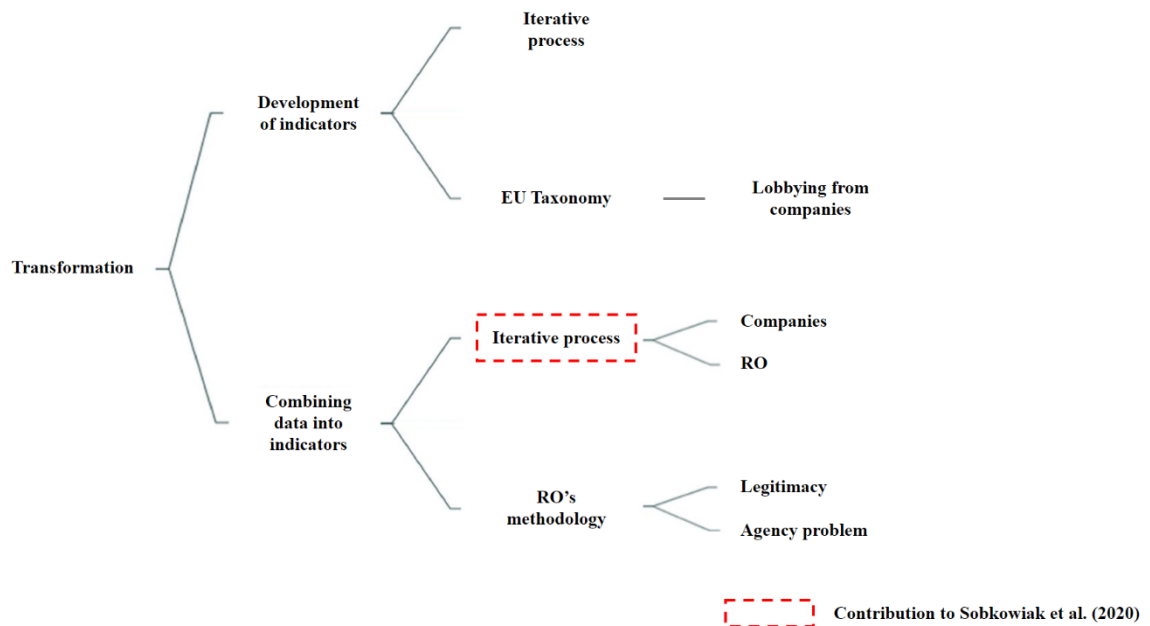
7.2. Appendix 2 – Interviewees

Interview	Title	Reference	Date of interview	Length of interview
1	Financial advisor (bank)	Financial advisor 1	2021-01-29	30 min
2	RO	RO	2021-02-01	30 min
3	CEO, CFO & Head of Sustainability (Case company)	Company 1	2021-02-18	60 min
4	CFO (Case company)	Company 2	2021-02-25	65 min
5	CEO (Case company)	Company 3	2021-02-26	40 min
6	Research analyst	Analyst 1	2021-03-04	65 min
7	Research analyst	Analyst 2	2021-03-05	40 min
8	Research analyst	Analyst 3	2021-03-08	35 min
9	Investor	Investor 1	2021-03-12	60 min
10	Research analyst	Analyst 4	2021-03-12	50 min
11	Sustainability Consultant Real Estate & Construction	Sustainability advisor	2021-03-22	50 min
12	Investor	Investor 2	2021-03-23	70 min
13	Impact investor	Investor 3	2021-03-24	30 min
14	Investor	Investor 4	2021-03-25	55 min
15	Research analyst	Analyst 5	2021-03-29	55 min
16	Research analyst	Analyst 6	2021-03-29	55 min
17	Investor	Investor 5	2021-03-29	30 min
18	Impact investor	Investor 6	2021-04-06	40 min
19	Financial advisor (bank)	Financial advisor 2	2021-04-19	30 min

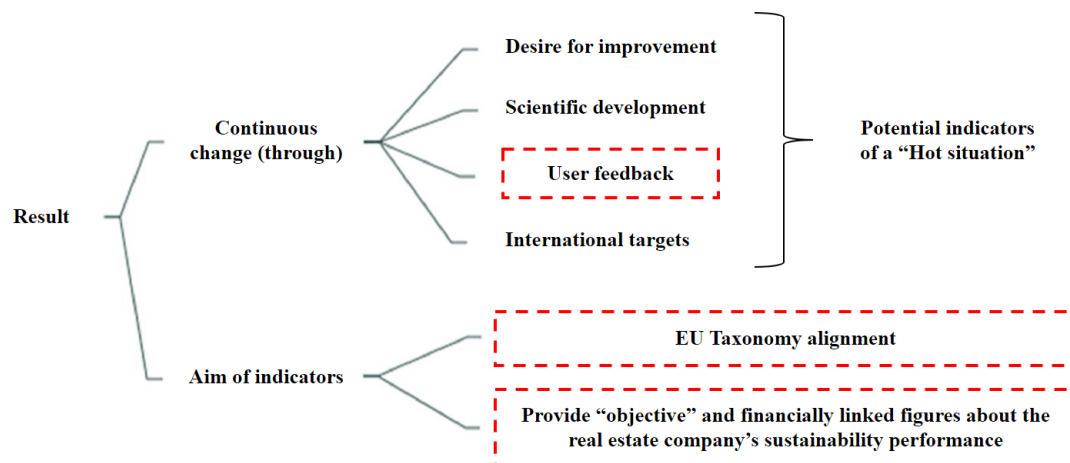
7.3. Appendix 3 – Figures



Appendix 3a – *Detachment and layout in a single space*



Appendix 3b – *Transformation and manipulation*



Contribution to Sobkowiak et al. (2020)

Appendix 3c – *Extraction of results*

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