

Anders Berg

Non-Financial Reporting Quality in Norwegian Companies - An Abductive Approach

Masteroppgave i Industrial Innovation and Digital Security

Veileder: Sigurd Sagen Vildåsen

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Norges teknisk-naturvitenskapelige universitet
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Preface

The research presented in this master's thesis was carried out at the Norwegian University of Science and Technology (NTNU) by collaboration between the Department of Industrial Economics and Technology Management and the Department of Information Security and Communication Technology at Gjøvik, under the supervision of Senior Research Scientist Sigurd Saagen Vildåsen. This thesis examines the status in non-financial reporting quality in Norwegian Companies and their position towards CSRD implemented by the EU. Furthermore, its purpose is also to add research and insights into the current field of non-financial reporting.

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Secondly, to my family and friends. Their love and understanding gave me the emotional strength needed to navigate the challenges which occurred during this academic endeavor. Moreover, their belief in my abilities and their willingness to lend an ear during setbacks and frustration have been invaluable.

Lastly, to all other individuals who have contributed to my journey in various ways. Your support, whether big or small, has played a crucial role.

Abstract

In Chapter 1 the definition of the word "quality" in NFR is presented, displaying attributes to both format and content as premises for companies' level of quality in NFR. These attributes contribute to the empirical background in the sense that companies are given a "score" from each GRI indicator linked to the Sustainable Development Goals and the ESRS Topical Standards. Scoring was given based on the scoring measurement system in chapter 4: Empirical analysis and results, and the definition of quality. Moreover, Chapter 3 shows contributions from academia, practitioners, and political influences with their research, development, and implementation of principles in ESG, non-financial reporting and corporate sustainability. Chapter 4 Empirical analysis and Results, shows some interesting findings about the non-financial reporting quality in Norwegian companies related to both SDG's and The ESRS Topic Standards linked with GRI Material Topic standards. Lastly, the company's materiality approach and omission were analyzed using documentanalysis.

Sammendrag

I kapittel 1 presenteres definisjonen av ordet «kvalitet» i NFR, som viser til attributter i format og innhold som premisser for bedrifters kvalitetsnivå i NFR. Disse attributtene bidrar til den empiriske bakgrunnen i den forstand at selskaper får en "score" fra hver GRI-indikator knyttet til Sustainable Development Goals og ESRS Topical Standards. Det ble gitt skåring basert på skåringsmålingssystemet i kapittel 4: Empirisk analyse og resultater, og definisjon av kvalitet. Videre viser kapittel 3 bidrag fra akademia, praktikere og politiske påvirkninger med deres forskning, utvikling og implementering av prinsipper innen ESG, ikke-finansiell rapportering og bedriftens bærekraft. Kapittel 4 Empirisk analyse og resultater viser noen interessante funn om NFR-kvaliteten i norske bedrifter knyttet til både SDG's og ESRS Topic Standards knyttet til GRI Material Topic standarder. Til slutt ble selskapets vesentlighetstilnærming og utelatelse analysert ved hjelp av en dokumentanalyse.

Abbreviation

Accountability Indicator = AI
Average Quality in decimals on SDG for each company
Average Quality in decimals for each SDG = SDGQ
Average Quality in decimals for SDG for each company = CQSDG
Average Quality in decimals for ESRS for each company
Average Quality in decimals for each ESRS Topic = QESRS
Conference of the Parties (Member nations of EU) = COP
Corporate Sustainability = CS
Corporate Social Responsibility = CSR
Corporate Sustainability Reporting Directive = CSRD
Dichlorodiphenyltrichloroethane = DDT
EFRAG = European Financial Reporting Advisory Group
Environmental, Social and Governance = ESG
European Union = EU
Evolution in SDG Quality = ESDGQ
ESRS = European Sustainability Reporting Standards
GHG = Greenhouse Gas
Global Reporting Initiative = GRI
Integrated Reporting Council = IIRC
ISO 2600 = Social Responsibility Framework (Following the ISO standard)
NDC`s = Nationally Determined Contributions
NGO = Non-Governmental Organization
Non-Financial Reporting = NFR
Non-Financial Reporting Directive = NFRD
PD = Problem Description
SMD = Sustainable
SME = Small Medium Enterprises
Sustainability Accounting Standards Board = SASB
Sustainable Development Goals = SDG`s
SQ = Sub-Question
Total Accountability Indicator = TAI
UN Commission on Sustainable Development = UNDP
United Nations Framework Convention on Climate Change = UNFCCC
United Nations Environmental Program = UNEP
Value Reporting Foundation = VFR
Qual = Qualitative
Quan = Quantitively

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Chapter 1: Introduction

Accountability for Humankind

Human activities have increasingly influenced the impact on the planet's ecosystems and climate changes, especially since the 1950s. The industry was scaling, and our impact started to rise which switched the state of our planet into a new epoch called the Anthropocene (Rockström et al., 2009). Even though researchers argue about when humanity went into the anthropogenic state, human activities have impacted earth systems. Humans are now the main driver towards the change in the earth system, which is scientifically proven in Rockström et al., (2009), Steffen et al., (2015). Consequently, humanity also has the capability and the responsibility to change the impact towards a safe and operating planet for all (O'Neill et al., 2018). In Rockström et al., (2009) the conceptual framework of "Planetary Boundaries" was introduced and proposed to address boundaries on a global scale. This conceptualization can be used as a benchmark for a safe and operating state which humans can operate with the respect of the earth systems. Based on metrics, measurements, and modeling from leading scientists within different interdisciplinary fields of sustainability, they proposed and conceptualized nine different boundaries to explain the state of the Earth Systems. Furthermore, infringement of boundaries may cause catastrophic consequences and contribute to a non-reversible state which will be alarming for our planet.

Scientists have downscaled the planetary boundaries into smaller settings showing the interconnection of the boundaries. Moreover, this shows that Infringement in one of the boundaries will impact the strains on other boundaries, i.e., deforestation will impact both biodiversity and the absorption capacity of carbon dioxide on a regional level (Asner, 2006). Still, the implementation and sustainable reporting in the scale of companies are rarely seen in the concept of planetary boundaries (Erlandsson, 2023). However, there have been many global events and political contributions which have shaped the concept of ESG and policy making in corporate sustainability throughout time. Examples of this are sustainable development goals set by the Brundtland report, UN Global Compact, The Paris Agreement etc. Furthermore, a new reporting practice has been implemented by the EU Commission called the Corporate Sustainability Reporting Directive (CSRD) to further strengthening sustainable development in EU.

Purpose of the Study

Because of a growing interest in corporate sustainability in later years, many different reporting frameworks have been conceptualized and used in practice for companies to disclose their non-financial information. Consequently, different methodologies, measurements and reporting standards in non-financial reporting are making the picture hard to assess for stakeholders. Moreover, Hahn et al., (2023) points to the studies from (Endenich et al., 2022) (Vedula et al., 2022) (Wickert, 2021) that current reporting

practices seem to favor and be capitalized by companies within advisory and auditing firms. Furthermore, the exploitation in the financial market to “greenwash” corporation's activities is also highly debated because companies tend to disclose non-financial information to gain access to scarce resources (De Grosbois, 2021). To deal with some of these concerns, a new non-financial reporting framework has been set out by EFRAG to ensure better quality for non-financial reporting in Europe. Purposely, this thesis seeks to find out how the Norwegian companies NFR quality is towards the new CSRD implemented by the EU. Lastly, Waal and Thjissens (2020), points out the lack of understanding of corporate involvement in the SDGs and refer to KPM (2018) report on 40% of the 250 largest companies disclose their work towards SDG´s.

This thesis connects the most used non-financial framework, namely the GRI Topical Standards to the UN Agenda 2030 Sustainable Development Goals to capture the evolution in Norwegian company`s non-financial reporting quality from 2018 - 2022.

Research Question and Structure of Chapters

This thesis aims to assist in filling the gap of research on quality in NFR and for the first time assess the Norwegian companies position towards the new CSRD. Moreover, provide some insights into current non-financial reporting practices for Norwegian companies. The problem description is formulated as:

“What is the status of non-financial reporting for Norwegian companies and how does this position them towards the new CSRD implemented by the EU?”

This problem description can be shed light too with many different methodological approaches and theoretical standpoints. However, to narrow down the scope of the thesis and further explore a particular aspect of the problem description, three sub questions are derived and used as a tool to answer the problem description

Sub Questions

The former part of the problem description questions the status in non-financial reporting for Norwegian companies. To achieve an answer to this question, this thesis connects and analyzes the GRI framework with UN SDG´s to gather empirical data.

First sub-question is derived as;

SQ 1: How can linking the GRI framework on UN SDG`s show the evolution in Norwegian companies' NFR quality?

The latter part of the problem description questions the Norwegians companies positioning towards the newly implemented CSRD. This thesis seeks to gather empirical data by linking and analyzing the ESRS framework with an existing reporting framework (GRI). Second sub-question is derived as;

SQ 2: How are Norwegian companies NFR quality towards the new ESRS framework by linking it to the GRI framework?

Since no companies have yet been obligated to follow the CSRD, the existing research is scarce. However, by analyzing the ESRS framework by EFRAG this thesis derives its last sub-question:

SQ 3: What are the differences between GRI Standards and the ESRS framework by EFRAG?

Quality in Non-Financial Reporting

There is no consensus in a universal definition of "quality" as it varies in different contexts (Reeves, 1994).

However, glossaries and definitions in *financial* reporting have been widely adopted in the context of non-financial reporting. The chosen definition of "quality" in NFR can be explained by Nederpelt (2011, p, 9-12) as different attributes in format;

1. Completeness
2. Relevance
3. Appropriateness
4. Compliance with standards

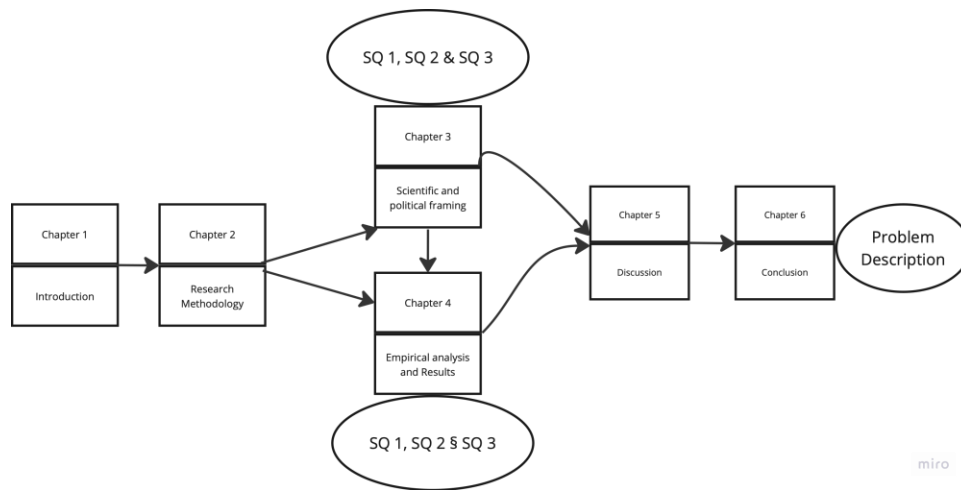
Furthermore, different attributes in content;

5. Accuracy
6. Clarity
7. Consistency
8. Transparency
9. Unambiguity
10. Language

This thesis will not further explain each of these attributes as they are explained by Nederpelt (2011). However, a self-made definition is used for this thesis;

"Level of quality in non-financial reporting depends on the company's ability to achieve completeness, relevance, appropriateness and in compliance with standards, moreover its content to be accurate, clear, consistent, transparent, unambiguous and readable".

Figure 1: illustrated below show this thesis structure and strategy:



(Source; Own creation)

Chapter 2: Research Methodology

Research Approach

Firstly, a research approach is often a path chosen by the researcher through either inductive or deductive approach (Saunders et al., 2007, p. 117-118). However, research often combines the two to various degrees. Saunders et al., (2007) highlights its strengths and recommends often doing so. The combination of research approaches is called an abductive approach. An abductive approach requires that there is a dialogue between theory and the empirical background, where the theory contributes to understanding the empirical background, but also that the empirical and analyzing contribute to developing theory (Mathisen and Volckmar-Eeg 2022).

A research design is defined as "*the general plan for how you go about answering your research question(s)*" (Saunders et al., 2007, p. 131). Saunders et al. points out the importance of distinguishing research design from research *tactics*. While the former concerns the plan of the study, the latter details the data collection and analysis (Saunders et al., 2007, p. 131). Moreover, the research tactics used in Chapter 3 and 4 will be explain more extensively in the respective chapters.

Primary and Secondary data

Data collection plays a very crucial role in statistical analysis. In research, there are different methods used to gather information, all of which fall into two categories, i.e., primary, and secondary data (Ajayi, 2017, p.1). As the name suggests, primary data is collected for the first time by the researcher, while secondary data is the data already collected or produced by others. Primary data is factual and original whereas secondary data is just the analysis and interpretation of the primary data (Ajayi, 2017 p.1)

Furthermore, as explained by Ajayi, (2017 p.4) secondary sources refer to information gathered previously by others for different purposes. These data, originally collected by an external party at an earlier time and became secondary data when utilized by a researcher

not involved in the initial data collection. Common sources of secondary data include government publications, websites, books, journal articles, and internal records, all of which were originally compiled for reasons unrelated to the current research study. When these existing data are repurposed for current research, they take on the role of secondary data for the present researcher. In this study many diverse types of secondary data are provided such as articles, websites, academic articles, other types of research papers, annual reports, law-documents, and guidelines etc.

Lastly, all literature and articles used throughout this thesis follows the reference style of APA 7.

Research Design

The sub questions set out the premises of the research design conducted in this study. Typical characteristics in a quantitative design is to explain and predict, to confirm and validate and to test theory, in a qualitative design it is to describe and explain, to explore and interpret and to build theory (Leedy and Ormrod, 2021).

There will be a combination of both quantitative and qualitative designs, also described as a mixed method design (Leedy and Ormrod, 2021). Mixed methods research has a significant potential to foster a shared responsibility in the pursuit of achieving accountability for educational quality by bridging the gap between quantitative and qualitative researchers (Johnson and Onwuegbuzie, 2004).

This mixed method design is used to easier understand and answer the sub-questions derived from the problem description. Moreover, a combination of qualitative and quantitative designs complements each other by strengthening the complete picture of the theory and practice (Leedy and Ormrod, 2021). Furthermore, it can answer a broader and more complete range of research questions because the researcher is not confined to a single design. The selection of tactics and design by researchers using mixed methods research is more likely to be guided by their underlying research questions than by existing biases regarding which research paradigm should predominate in social science research. Consequently, a mixed design can be more time consuming and paradigm mixing can lead to conflicting results (Johnson and Onwuegbuzie, 2004). However, to avoid some of these issues, a conceptualized mixed matrix design is used;

		Time Order Decision	
		Concurrent	Sequential
Paradigm Emphasis Decision	Equal Status	QUAL + QUAN	QUAL → QUAN QUAN → QUAL
	Dominant Status	QUAL + quan QUAN + qual	QUAL → quan qual → QUAN QUAN → qual quan → QUAL

Note. “qual” stands for qualitative, “quan” stands for quantitative, “+” stands for concurrent, “→” stands for sequential, capital letters denote high priority or weight, and lower case letters denote lower priority or weight.¹¹

Figure 2: Conceptualized mixed matrix design (Source: Johnson and Onwuegbuzie, 2004)

Research Tactics

Firstly, Chapter 3 will present the scientific studies and political influences in ESG and non-financial reporting and corporate sustainability. This secondary data is an important contribution to the discussion chapter where the study will draw lines with the empirical analysis as one of the strengths following a sequential mixed method.

The literature collected in this thesis uses different purposive sampling keywords. As a result, some of the current NFR and ESG literature is presented to give some insights into the current research which present valuable information to answer the problem description. The main source of finding secondary data has been through search engines such as; Google Scholar, Oria, Web of Science and Google.

Furthermore, a snow-ball effect approach has been conducted to investigate the different perspectives and characteristics throughout the research of NFR and ESG. Lastly, the number of citations has influenced the choice of papers.

Purposive Keywords and Snow-Ball Effect

A purposive sampling enables the researcher to select literature most likely to the study's objectives. This form is most relevant in case-studies where the sampling is low (Saunders et al, p.230). Different keywords have been used purposely such as; non-financial

reporting, NFR, NFR quality, ESG, Corporate sustainability, NFRD, CS, CSR, ESRS, SDG`s, Sustainable Development Goals, materiality, double materiality etc. Additionally, keywords in combination. Furthermore, the Snow-Ball method is used because many articles refer to other relevant studies done in a particular field of research. An illustration is shown below:

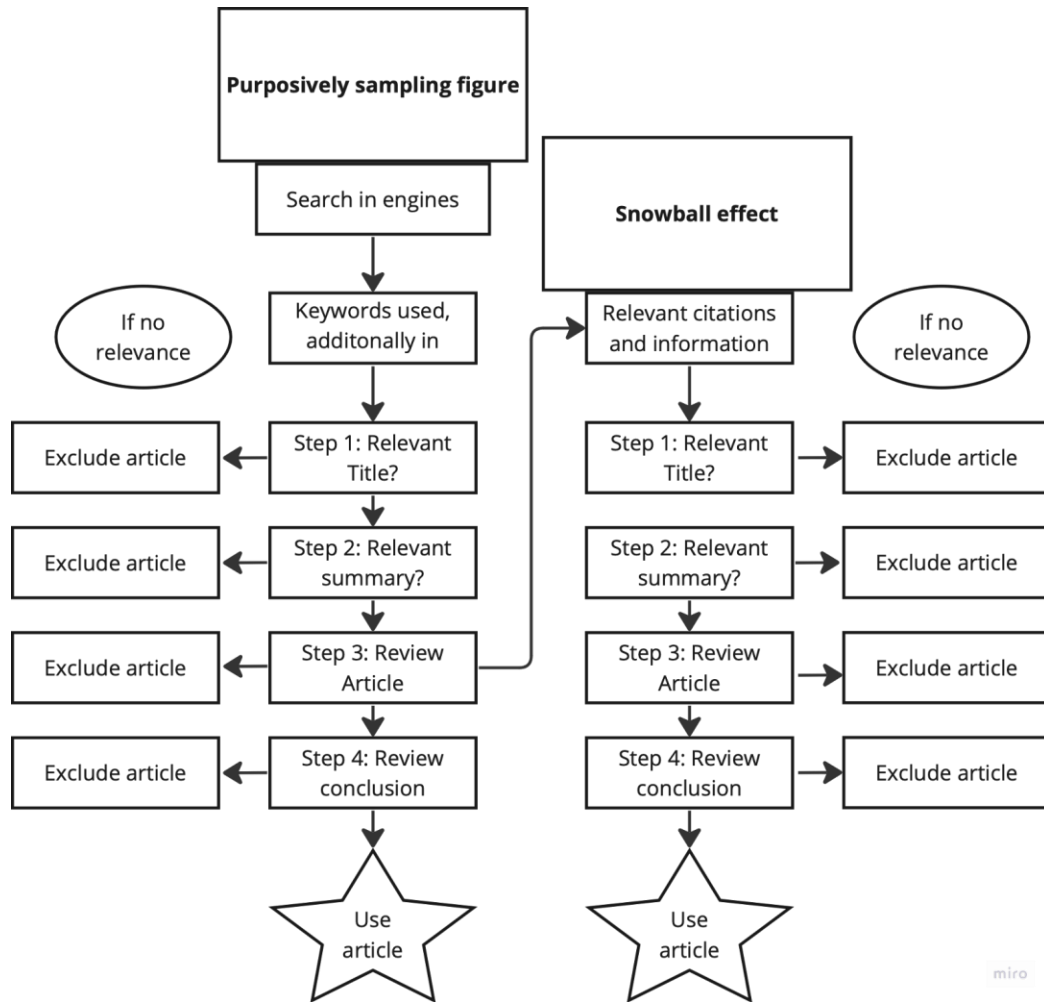


Figure 3: (Source; Own creation, illustration of purposively sampling and snowball effect used in chapter 3)

Document Analysis

Document analysis is a method characterized by a methodical examination of documents, followed by an analysis to derive empirical insights. This approach is particularly applicable for qualitative studies that delve deeply into a singular phenomenon (Bowen, 2009, p. 27). Furthermore, Furthermore, Fifka et al., (2011) conducted an examination of empirical studies on sustainability reporting, focusing on the methods employed. Their findings revealed that content analysis emerged as the predominant method in sustainability

reporting studies. Typically, annual reports, and occasionally sustainability reports, constituted the primary documents subjected to document analysis.

The application of document analyzing the reports by the chosen companies in this study necessitates the establishment of consistent rules to ensure methodological understanding when using a scoring system.

Since studies on materiality is rather scarce, a holistic approach is used to derive insight into companies materiality, omission and stakeholder perspective.

In this study, the document analysis is used to review reports (annual reports, sustainability reports, GRI index) and the use of scoring system to support SQ 1 and SQ2. Furthermore, a holistic approach to assesment of companies materiality and explanation of omitted disclosures is used in SQ 3.

Measurement system

The measuring system offers a way to quantify the examination of sustainability reports for each SDG indicator and ESRS E, S and G topic indicator. Any attempt to evaluate the qualitative or quantitative indicator "real" performance would bring into question the validity of the method. The information in the reports is therefore trusted to be real. Lastly, the measuring system was chosen with the intention of developing a widely utilized approach for different stakeholders (Tsalis et al., 2020). It includes easy indications that guarantee consistency and accuracy of the assessment outcomes. However, the process of analysing all the indicators are timeconsuming.

The measurement system by Tsalis et al., (2020) has been adopted with some slight changes. Remembering the definition used in Chapter 1:

"Level of quality in non-financial reporting depends on the company's ability to achieve completeness, relevance, appropriateness and in compliance with standards, moreover its content to be accurate, clear, consistent, transparent, unambiguous and readable".

By including the possibility to give 2 points with qualitative information. The reason being that evaluation of the disclosure should also be logical in a sense that no quantifiable table must be presented to get 2 points.

The first indication is the accountability indicator (AI), which use a 3-point scoring system (Tsalis et al., 2020) to evaluate the "quality" of the data supplied in the reports for each disclosure topics:

1. When information is absent or omitted without explanation from a Topic GRI standard, it receives a score of 0.
2. When qualitative details on a particular disclosure issue are presented to partially explain the requirement, it receives a score of 1. Furthermore, 1 point is given if the quantitative data is partially presented according to the requirement.
3. 2 points are awarded when specific disclosure topics are addressed quantitatively/and or qualitatively fully according to the GRI topic requirements.

Disclosure 405-1

Diversity of governance bodies and employees

Reporting requirements

The reporting organization shall report the following information:

- a. Percentage of individuals within the organization's governance bodies in each of the following diversity categories:
 - i. Gender;
 - ii. Age group: under 30 years old, 30-50 years old, over 50 years old;
 - iii. Other indicators of diversity where relevant (such as minority or vulnerable groups).
- b. Percentage of employees per employee category in each of the following diversity categories:
 - i. Gender;
 - ii. Age group: under 30 years old, 30-50 years old, over 50 years old;
 - iii. Other indicators of diversity where relevant (such as minority or vulnerable groups).

Figure 4: (Source; GRI 405: DIVERSITY AND EQUAL OPPORTUNITY, 2016)

This means that if a company is able to comply with a) and b), it receives 2 points. Moreover, 1 Point is given if either a) or b) is disclosed. Lastly, 0 point is given if neither a) nor b) is disclosed.

Data selection in Empirical Analysis

The GRI reporting standard will be linked to both the SDG`s and the ESRS framework which is why the reports gathered must follow the GRI standard. To compare the sustainable reporting quality of companies, there is a need to access the annual reports. Firstly, this is done by searching in Kapital for the top 100 companies in Norway. Furthermore, a random selection of 8 companies were chosen from the list which results in 24 assessed GRI reports total. The company who did not report according to the GRI standard was eliminated throughout the process. This thesis is limited to 8 companies because of the timely work of analyzing these reports.

By choosing the annual reports in 2018 and 2022 there is a gap of 4 years, which is chosen intentionally to capture the evolution in NFR for Norwegian companies. 1 company has their starting point in 2019 (Vår energi) Lastly, since the ESRS framework is a new NFR guideline tool to comply with the CSRD, only the newest report (2022) will be analyzed. Furthermore, the 2022 reports and public relevant information on the selected companies is used to analyze omission and materiality approach in a holistic manner.

Companies chosen for this study:

Companies	Companies
Norsk Hydro	Vår Energi
Moelven ASA	Yara

DNB ASA	Orkla
Telenor ASA	Elkem

Table 1: The chosen companies in this study (source: own creation)

Validity

Validity concerns whether the results genuinely reflect what they purport to represent, according to Saunders et al. (2007, p. 150). Moreover, Saunders et al. distinguish between internal and external validity (2007, p. 137). Internal validity is defined as "the extent to which the findings can be attributed to the interventions rather than any flaws in your research design". Internal validity pertains to the accuracy of research findings. Conversely, external validity addresses the question of whether research outcomes can be equally applicable to different settings (Saunders et al., 2007, p. 151).

Internal validity throughout this thesis has some interventional effects. Firstly, the primary data was gathered before the finalization of the ESRS guidelines. Consequently, the interpretation of linking the GRI Material Topic standards to the ESRS framework should have been revised to ensure that the "score" given to the selected companies is to be accurate. However, after assessing the differences between GRI and ESRS in Chapter 3, this strengthens the choice of linking the different GRI topics to ESRS Topical Standards in a "simpler" way because the framework is new, and a detailed comparison would not have been possible nor logical. Consequently, this is one of the flaws of working in a scarce field of research because it cannot be generalized as the best method to use for assessing accurately a company's position towards CSRD. However, as this study is following an abductive approach, it may be the best predictions so far.

Reliability

Reliability is defined as the degree to which your methods of data collection or analysis will produce consistent results, as stated by Saunders et al. (2007, p. 149). Easterby-Smith et al. (2002), cited by Saunders et al., 2007 offer three questions to evaluate reliability:

- Do the measures produce consistent results on various occasions?
- Do other observers arrive at similar observations?
- Is there clarity in the process of deriving meaning from the raw data?"

The points distributed in the measuring system will vary from person to person because no human being can be completely objective (Leedy et al 2021). However, the measurement system is using a 3-point system ranging from 0-2 points and the indicators are easily understood in the SDM`s making it a reliable system to use for others who want to adopt the same methodological framework to analyze future NFR reports. Moreover, a measure that was taken to ensure reliability was to assess one of the company twice. If the deviation

between the observed “score” led to noticeable deviations, the measurement system would have to be more specific. Furthermore, the clarity in the process is quite simple because the raw data can be assessed by anyone using a the scoring system. However, the document analysis on materiality and omission could have been tested by another researcher with the use of Cohens Kappa as a statistical measure used to assess the level of agreement between two raters or observers who are categorizing or classifying items (Lydersen, 2018).

An illustration of the *research tactics* used in the study is shown below;

Problem Description	Sub question	Research approach	Methodology	Type of data	
What is the status of non-financial reporting in Norwegian companies and how does this position them towards the new CSRD implemented by the EU?	SQ1: How can linking the GRI framework on SDG`s show the evolution in Norwegian companies' NFR quality?	Qualitative	Document analysis	Primary Data	
		Quantitative	Measurement system		
	SQ2: How are Norwegian companies NFR quality towards the new ESRS framework by linking it to the GRI framework?	Qualitative	Document analysis	Primary data	
		Quantitative	Measurement system		
	SQ3: What are the differences between GRI and the ESRS?	Qualitative	Document analysis	Secondary Data	
	Theoretical framing and political contributions	Qualitative	Purposive & Snowball sampling	Secondary Data	
	miro				

Table 2: Research tactics (Source: Own creation)

From the mixed design matrix by Johnson and Onwuegbuzie, (2004) a sequential QUAL → quan design is determined as most suitable for this study. Research tactics used in Chapter 3 and Chapter 4 are explained further in the respective chapters.

Chapter 3: Scientific and Political Framing

Intro

This chapter serves as the backbone of the study, providing insights into the concepts of ESG, non-financial reporting and political contribution on corporate sustainability which will support the sub-questions throughout this thesis.

The methodology for this chapter involves collecting secondary data using purposive keywords and a snowball effect, as mentioned in chapter 2.

A Brief History

In this section a brief history of global events on sustainability will be presented to introduce some of its influence towards corporate sustainability development.

Silent Spring

In 1963, A book called: "Silent Spring" was published. As one of the first to challenge an industry and its impact on nature. In this story, Dichlorodiphenyltrichloroethane (DDT) was exposed for its damaging and toxic features towards nature and humans. DDT is an insecticide which was categorized as the strongest pesticide in the world and was an effective poison to kill insects in the industry of agriculture (NRDC, 2015). It was first banned in the USA in 1972 and Europe in 1978 (CDC, 2023). Even though the author Rachel Carson was highly criticized for her book, she raised important questions about how human driven actions impact society and nature.

Stockholm, The First World Conference on Environmental Issues

The world's first conference on the human environment was held in Stockholm in 1972 by the UN. To create a common shared perspective on how to approach the problem of maintaining and improving the human environment, Stockholm represented the first assessment of the worldwide human effect on the environment. As a result, they were promoting broad environmental policy (Handl, 2012). Furthermore, The Stockholm Declaration can be divided into 26 different principles with a focus on the relationship between global well-being of people, economic development, and environmental contamination of the air and ocean (UN, n. d). International environmental law-making and awareness of environmental challenges worldwide grew dramatically after the Stockholm conference (Handl, 2012). Lastly the creation of the United Nations Environmental Programme was born (UNEP), (UN, n. d).

Brundtland Report

The UN installed the Brundtland commission and In 1987, the report: "Our common future" was published. The report pointed out universal problems combining human needs with responsible handling of the planet's natural resources.

The concept of "sustainable development" was introduced. This concept is an important contribution for today's developed policy; the three pillars of economic growth, social development, and conservation of the environment and the term "sustainable development" were introduced (Gerasimova, K, 2017, P. 69).

Sustainable development is defined as: *"Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs"* (Brundtland et al., 1987)

Even though Brundtland and her commissioners were not the first to use this word, they were the first to give it a broad international exposure, and as a result contributed to its widespread adoption (Gerasimova, 2017).

Furthermore, it also influenced the framework of the triple bottom line by John Elkington in 1994 (Elkington, 1999). Lastly, The Brundtland Report also urged the UN to create the UN Program of Action on Sustainable Development to put its recommendations into action. "The Earth Summit" in Rio de Janeiro 1992 was built on the principles laid out in the report, and in the same year the UN Commission on Sustainable Development was established as a result (UNDP) (Gerasimova, 2017).

The Earth Summit, Rio De Janeiro

"The Earth Summit", often referred to as the United Nations Conference on Environment and Development (UNCED), took place in Rio de Janeiro, Brazil in 1992. A massive effort was made to focus on the consequences of human socio-economic activities on the environment at this international conference. Politicians, diplomats, media, NGOs (non-governmental organizations) from 179 different countries attended and 154 signed the treaty (UN). At the same time, an unprecedented number of NGO representatives gathered in Rio de Janeiro for a "Global Forum" of NGOs, where they shared their individual predictions for the future of the planet in terms of the environment and socio-economic development (UN, n. d).

The conference brought to light how social, economic, and environmental issues are interrelated and evolve together, and how success in one sector involves action in other sectors to be sustained over time. The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty where its goal is to stabilize greenhouse gas concentrations in the atmosphere back from our self-made anthropogenic state (Schoenmaker and Schramade, 2019). From 1995 and onwards, there has been an annual Conference of the Parties (COP) meeting to assess progress in dealing with climate change (UN, n. d).

The Paris Agreement

In the same year, FN held a conference (COP21) in Paris where it was announced that 196 countries had signed The Paris Agreement. This agreement can be seen as a landmark

because it is the first time a legally binding treaty on climate change has been agreed upon by most world nations. The developed countries agreed upon to take the leading role in financing the transformation needed and by doing this, The Paris Agreement put emphasis on the differences between countries (Delbeke et al, 2019). Emissions reduction calls for large investments due to the considerable financial resources required to mitigate the negative consequences and adapt to changing the climate. Climate finance is equally vital for adaptation (UNFCCC, n. d). Furthermore, the overall achieving goal of The Paris Agreement is to keep the global temperature well below 2 degrees Celsius. Moreover, the UN's Intergovernmental Panel on Climate Change has indicated there are consequences if the state of the planet is between 1,5 - 2 degrees Celsius which is pushing world leaders to act and limit global warming to 1,5 degree or below as fast as possible (UNFCCC, n. d). Lastly, the Paris Agreement works on a 5-year cycle, where it will be assessed, and countries will need to increasingly take actions toward climate change. These action plans are carried out by the NDC`s (nationally determined contributions). The NDC is how countries will communicate, report and show transparency through their action plans to build resilience and to adapt to the impact of climate change. There are also obligations to disclose the action plans towards reduction in greenhouse gas emissions to be aligned with the target in The Paris Agreement (Delbeke et al, 2019).

Concept of ESG And Sustainability

The concept of ESG was introduced in the whitepaper "who cares who wins" by the UN in 2004. ESG stands for environmental, social and governance. Even though the UN was not the first to use these acronyms, they were the first to really put the term on the map for organizations and stakeholders. The "E" emphasizes environmental indicators such as pollution, biodiversity loss and global warming. As for "S" is addressing indicators such as gender equality, human rights, working conditions, etc. Lastly "G" is focusing on ineffective decision-making, reputational and regulatory risks, higher cost of capital etc. A conceptualized figure is shown below.



Figure 5: ESG conceptualized (Source: Hauptmann, 2020)

For this thesis, ESG as an acronym will be used complementary with the word sustainability but specified when needed. The term "sustainability" has been defined differently throughout research, academia and policymaking for a long time which makes it hard to grasp on one "true" definition (Moore et al., 2017). For this thesis, the definition from the Brundtland report is used;

Development that meets the needs of the present, without compromising the ability of future generations to meet their own needs ((Brundtland et al, 1987)

As the idea of ESG has gradually been more popular throughout the last couple of decades, it has been widely studied by practitioners and researchers, leading to a more mature understanding in sustainability. A bibliometric review done by Li et al., (2021), shows that most of the theoretical literature in ESG is based around institutional, legitimacy and stakeholder theory. This is due to the important fact that "decision making" and the development of sustainability in organizations is widely interdependent with its stakeholders. Furthermore, the development and production in companies depends on their activities being legitimate from both internal and external environments. Even though these theories centralize the research of ESG, the researchers also found different angles and characteristics within the theoretical literature showing a diverse theoretical literature is conducted (Li et al., 2021)

Lastly, the authors in the study point out that the ESG measurement system has its limitations due to a variety of reasons such as the lack of a unified standard for measurement which can lead to deviations. To solve this, the authors suggest a unified system globally alongside the characteristics of the different industries and the institutional backgrounds. Companies highlight their work towards sustainability and ESG topics with different NFR frameworks which will be explained in the next section.

Non-Financial Information and Reporting

NFR in academic literature seems to have an unclear meaning in the definition, many times it is used as an umbrella term I.e; Sustainability report, CSR report, GRI Report etc are all types of NFR but the framework and its content differs. Haller et al., (2017), describe the lack of convergence in the use of non-financial information as: "Up to now, neither a common meaning nor an accepted definition of 'non-financial information' exists".

NFR has been a growing practice over the last decade due to growing interest in ESG matters. It is a comprehensive term which is interweaving several other fields of study such as financial accounting, strategic management, and business ethics (Turzo et al., 2022).

Furthermore, NFR has evolved throughout time leading to diverse types of reports where its structure, disclosure requirements and the use of glossary differ from each other. There can be a risk of confusion and misinterpretation for both practitioners and researchers because of the many nomenclatures created (Turzo et al., 2022).

In the next section the most widely used NFR framework of Global Reporting Initiative (Hereby GRI) will be further examined.

GRI Standards

Since 2013, § 3-3 c "*Redegjørelse om samfunnsansvar*" (Act on social accountability) was implemented in Norway, big companies at the very least must address issues related to the environment, social conditions, working conditions, equality and non-discrimination, bribery and corruption prevention, and adherence to human rights (Lovdata, 2023). How organizations are doing this has been free of choice from the law implementation in 2013. There are many different non-financial frameworks such as GRI, ISO26000, SASB, CDP, IIRC, TCFD etc. In Norway and globally, the most used non-financial framework is the GRI Standards (Rogmans and El-Jisr, 2022), which will be presented in depth in this section.

Since 1999, The GRI principles have been adopted by organizations worldwide because of its comprehensiveness, visibility, and prestige (Chang et al, 2019) The GRI Standards allows organizations to provide information about their impacts on the environment, people, or the economy or with specific topics such as child labor or climate change (GRI, W. Y). The GRI Standards can be put into 3 main categories; Universal Standards, Sector Standards and Topic Standards which is illustrated below:

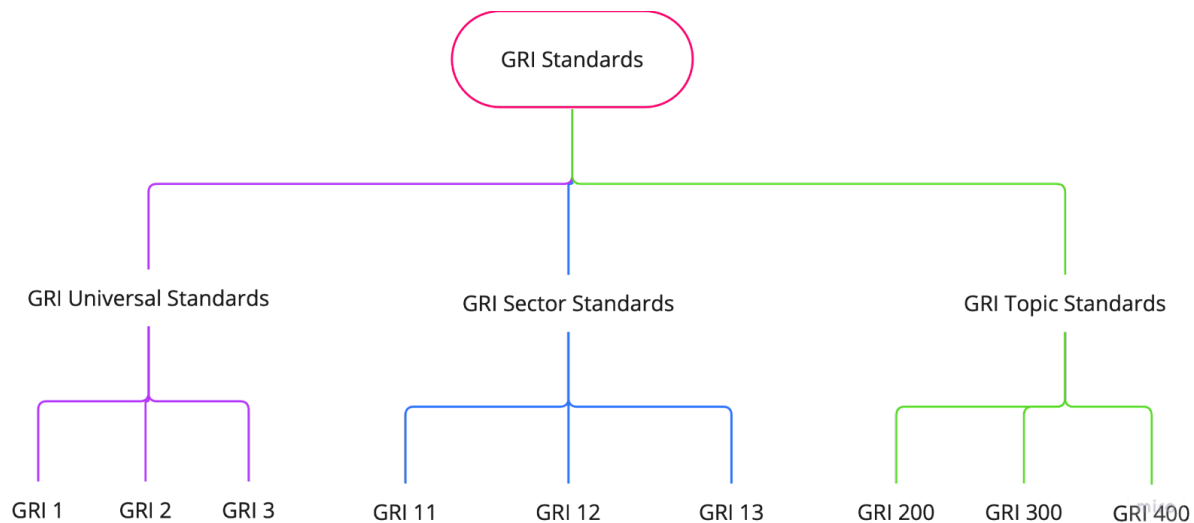


Figure 6: GRI Standards, adopted from: (GRI foundation, 2021)

From GRI foundation (2021), GRI Material Topics (2021) and GRI 2: General Disclosures (2021) these standards are shortly explained down below:

GRI Universal standards:

GRI 1: Key ideas for sustainable reporting are explained, along with the goal and system of the GRI Standards. As part of reporting in accordance with the GRI Standards, the company must adhere to certain requirements and reporting principles, which are outlined in GRI 1.

GRI 2: The company utilizes disclosures in GRI 2: General Disclosures to explain companies reporting procedures and other organizational elements, such as its operations, policies, and governance. This information offers context for comprehending the organization's impacts and provides insight into the characteristics and scale of the organization.

GRI 3: How to choose material topics is explained in detail in GRI 3: Material subjects. Also, GRI 3 includes disclosures the organization uses to provide details on how it selects material topics, how they are managed and a list of them.

GRI: Sector Standards

Organizations obtain information about their expected material topics from the sector standards. There are currently 40 different sector standards. The organization determines its material topics and what information to present for the material topics and the Sector Standards helps the organizations to pick the correct material topics which is specifically for the sector.

GRI: Material Topic Standards

Information disclosures for topics are included in the GRI Topic Standards. Examples of this include carbon emission, occupational health and safety, waste etc. Each Standard includes an overview of the subject, disclosures that are specific to the subject and information on how an organization manages the impacts that are related to it. An organization chooses the Topic Standards that are appropriate for the chosen material themes and applies them to reporting. These topic standards can be divided into the 201 (Economic), 301 (Environmental) and 401 (Social) series. In this thesis, the 201 - 401 series will be used for connecting GRI to both the SDG`s and ESRS framework.

[Sustainable Development Goals](#)

The 17 SDG`s were adopted by the UN General Assembly in 2015. The purpose of these goals is to establish achievable objectives that can be met as part of the 2030 Agenda for Sustainable Development, i.e, "the goals and targets will stimulate action over the next 15 years in areas of critical importance for humanity and the planet" (UN, n. d). The SDGs are further divided into 169 targets, and as of right now, 230 indicators have been proposed to

measure the achievement of these targets (UN, n. d). An overview of the 17 SDG ´s are shown below;

SDG`s	Topic	Description
UN_SDG_1	No poverty	End poverty in all its forms everywhere.
UN_SDG_2	Zero hunger	End hunger, achieve food security, improve nutrition and promote sustainable agriculture.
UN_SDG_3	Good health and well-being	Ensure healthy lives and promote well-being for all at all ages.
UN_SDG_4	Quality education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.
UN_SDG_5	Gender equality	Achieve gender equality and empower all women and girls.
UN_SDG_6	Clean water and sanitation	Ensure availability and sustainable management of water and sanitation for all.
UN_SDG_7	Affordable and clean energy	Ensure access to affordable, reliable, sustainable and modern energy for all.
UN_SDG_8	Decent work and economic growth	Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.

UN_SDG_9	Industry, innovation, and infrastructure	Build resilient infrastructure, promote inclusive, and sustainable industrialization and foster innovation.
UN_SDG_10	Reduced inequalities	Reduce inequality within and among countries.
UN_SDG_11	Sustainable cities and communities	Make cities and human settlements inclusive, safe, resilient, and sustainable.
UN_SDG_12	Responsible consumption and production	Ensure sustainable consumption and production patterns.
UN_SDG_13	Climate action	Take urgent action to combat climate change and its impacts.
UN_SDG_14	Life below water	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
UN_SDG_15	Life on land	Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
UN_SDG_16	Peace, justice, and strong institutions	Promote peaceful and inclusive societies for sustainable development; provide access to justice for all and build effective, accountable, and inclusive institutions at all levels.
UN_SDG_17	Partnership for the goals	Strengthen the means of implementation and revitalize the global

		Partnership for Sustainable Development
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Table 3: Sustainable Development Goals (Source: Tsalis et al., 2020)

These goals are interlinked with each other in several ways. For instance, "Quality Education" is a social system aim, it might also be viewed as an economic system given the importance of education to the creation of human capital and future long-term economic growth (Barbier and Burgess, 2017). The 17 SDGs recognize that development must balance social, economic, and environmental sustainability and actions in one area will have an impact on others. The industrial countries have agreed to give those countries who are falling behind the most priority, such as poor developing countries. The SDG`s aim is to eradicate hunger, AIDS, poverty, and prejudice against girls and women etc. (UNDP, W. Y). To succeed with the SDGs, this requires creativity, knowledge, technology, and financial resources of the entire population (UNDP, W. Y). Furthermore, business community members place a high importance on complying with Sustainable Development Goals. Lastly, by the need to modify their operations and strategies to meet the SDGs' criteria, the 2030 Agenda and its 17 SDG`s present new challenges for companies (Tsalis et al., 2020).

Research In the Field Of NFR, GRI and SDG

Turzo et al., (2022) citing many different researchers in his study: "Non-financial reporting research and practice: Lessons from the last decade";

Diouf and Boiral (2017) examined the stakeholder's opinions of NFR quality and discovered that GRI principles are only vaguely implemented and frequently modified to meet the demands of some stakeholders, i.e by omitting different GRI principles by poor explanations. Furthermore, there is a lack of transparency in NFR, which limits the methodologies used by the companies to identify material topics citing (Beske et al., 2020) (Boiral, 2013). Lastly, lack of transparency also hinders comparability in the industries and NFR as a tool for legitimacy (Boiral and Henri, 2017) (Cho et al., 2015) (Pizzi et al., 2020). NFR practices were also affected by institutional ownership. Companies that reported NFR in accordance with GRI principles chose to incorporate data from the 2030 agenda into their reports, particularly if they were controlled by foreign institutional investors or pension funds. These findings show that institutional ownership improved SDGs reporting quality (García-Sánchez et al, 2020). Moreover, Rosati and Faria (2019) highlighted the importance of institutional factors in non-financial reports that included SDGs by demonstrating that companies which reported about SDGs were most likely to be based in nations with prominent levels of national corporate social responsibility, individualism, and indulgence. Furthermore, low levels of market coordination, employment protection, power distance, and long-term orientation also affected SDG reporting quality. Moreover, studies show that quality in NFR depends on the organization's geographical location (Luo et al, 2020). Lastly, regulatory, consumers, and social stakeholder pressures have a positive effect on GHG

reporting quality, however, shareholders, creditors and CEO age had negative effects on GHG reporting quality (Chithambo et al., 2020).

Studies also show that NFR quality has a positive correlation with the cost of stock and future cash flows as two factors that contribute to business value (Plumlee et al., 2015). As a result, NFR can play an important part in the decision-making process of investors because of the correlation between the quality of NFR on earnings (Plumlee et al., 2015, Rezaee and Tuo, 2019). Moreover, Orazalin and Mahmood (2020) studied GRI reports for companies in Kazakhstan and found different determinants which influenced the NFR quality such as firm size, stand-alone report, profitability, reporting language and auditor type. Firm size and sustainability risk is also found to positively increase the quality in Norwegian companies following the GRI standards (Christensen and Johansen, 2022). A factor which has been studied more extensively with various results is assurance. Christensen and Johansen (2022) found no effects of assurance, however in the study from Ballou et al, (2018) points out that it will be easier for an auditing firm to identify mistakes and comment on them. Moreover, Bekken and Svendsen (2021) support the idea that if auditors assure sustainability reports it will increase its purpose for institutional investors.

Hahn and Kühnen (2013) studied articles in journals from 1999 to 2011 and point out that while researchers examine the impacts of numerous determinants, only a handful of variables, such as company size, visibility, and sector affiliation, receive substantial attention and are consistently linked to clear conclusions. In contrast, research on most other determinants tends to yield inconsistent findings. Lastly, Hahn and Kühnen (2013) identified two studies that investigate the impact of assurance on the perception of sustainability reports through experimental designs. In both studies, it was observed that the perceived credibility of a sustainability report increases when it undergoes assurance, particularly when the assurance is conducted by professional accountants (Hodge et al., 2009; Pflugrath et al., 2011).

From a master thesis in the Netherlands, Frans (2021) investigated the relationship between financial reporting quality and NFR quality (GRI used as sustainability reports) from Dutch publicly listed companies. Only one of the measurement used was statistically confirmed; accounting conservatism. There were also other measurements which positively had impacts on NFR, but these were not statistically confirmed. However, this shows that there can be some resemblance between financial reporting quality and NFR quality. There is a limitation towards paper, and the author points out the few measurements used in the study because there are other measurements found in the literature.

In Cicchiello et al, (2022) the researchers try to capture the effect of the EU regulation NFRD has on ESG rating score for companies. They are using an estimation technique called difference-in-difference where U.S companies are used as the control group and the EU companies as treated groups in the period from 2015-2020. Their findings show a significant rise in the ESG ratings of European companies that fall under the disclosure rule. The researchers explain this by the growing external pressure from stakeholders that followed the adoption of the NFRD, which required disclosure of non-financial and diversity

information. This study shows that mandatory obligations on NFR improves ESG ratings which is an important contribution towards policy making for the EU. It is important to remember that firms who are giving companies an ESG score rating often are not transparent in their methodology scoring system. However, the study from Aluchna, et al (2023) shows that mandatory NFR is not sufficient to improve disclosures regarding climate change. Furthermore, companies' characteristics related to female representation on boards might stimulate the process of greater transparency and the implementation of mandatory NFR disclosure into practice.

In Györi and Szigeti (2023), they investigated the non-financial practices in Hungary and their position towards the CSRD. Their assessment was on companies which already fall under the NFRD regulation where they list a figure of parallels between the GRI and the ESRS framework. The companies write mostly about the social, environmental dimensions and employment issues in their annual reports, while there is little information on corruption and human rights. Furthermore, the researchers state that Hungarian companies try to avoid detailed data and neither the government, auditors nor other stakeholders expect anything more. The same study also investigated SDG`s in companies showing that different sectors focus on different SDG`s which they see as logical because of the consequences of their different activities.

In Chang et al., (2019) Their findings indicate that financial institutions in developed countries generally produce sustainability reports of better quality. Additionally, those institutions adhering to Islamic principles and incorporating corporate social responsibility (CSR) values into their core mission and vision tend to exhibit enhanced NFR quality. Moreover, private financial institutions surpass government-owned ones in terms of the quality of their NFR reporting.

The results of the study from (Waal and Thjissens, 2020) indicate that corporate engagement with the Sustainable Development Goals (SDGs) remains constrained. It is primarily linked to a dedication to other sustainability-related topics, East Asian country contexts, company size, and the level of corporate sustainability. This suggests that participation in SDGs is influenced by a combination of legitimacy and institutional motives. Waal and Thjissens (2020), citing data from KPMG (2018), state that 40% of the world's 250 largest companies incorporate the Sustainable Development Goals (SDGs) into their sustainability reports. The survey suggests that the business focus on the SDGs has experienced rapid growth since their introduction in September 2015. Furthermore, Waal and Thjissens, (2020) points citing the quote: "create value for the common good" (Dyllick and Muff, 2015) as a paradox because of the tension between two conflicting objectives for businesses: creating value for the common good and generating shareholder value. On one hand, there is a growing call for companies to contribute to the well-being of society by addressing environmental, social, and governance issues, in the idea of "creating value for the common good." This perspective emphasizes a broader societal responsibility for businesses, beyond just financial returns (Waal and Thjissens, 2020). On the other hand, the traditional and widely accepted goal for publicly traded companies, especially large corporations, is to maximize shareholder value. This goal often implies a

focus on financial performance and returns to shareholders. Shareholders typically expect companies to prioritize strategies that enhance profitability and stock value. The paradox arises because the pursuit of shareholder value has not always aligned with the broader goals of societal well-being, environmental sustainability, and social responsibility. Businesses have been critiqued for prioritizing short-term financial gains at the expense of long-term sustainability and social impact.

NFRD and the Evolution to CSRD

In 2014, the NFRD first draft was introduced, and about 11 000 European companies were required to report on their obligations starting from 2017 with EUG as a guideline. In Norway, NFRD is followed through § 3-3 c (Act on social accountability).

On January 20, 2020, the consultation made the NFRD Implementation Appraisal public (Noonan, 2023) (Hahnkamper-Vandenbulcke, 2021). The evaluation confirmed that market participants pointed out various flaws with the NFRD, especially the stakeholders of the investment community: European Commission (2021);

1. In terms of quality, non-financial information offered by preparers lacked comparability, reliability, and relevance. This makes the landscape hard for users to assess the information. Moreover, the users suggested adding 50 different non-financial matters relating to the Taxonomy Regulation, supply chain and governance. The preparers stated that the additional information from NGO 's and rating agencies were a big problem.
2. There is also overlap between many sections of sustainability reporting law, which adds to the financial burden and ambiguity around the reporting obligations for companies. Respondents also agreed that all legislation regarding reporting and disclosure should be streamlined to avoid overlaps and gaps. Furthermore, respondents also pointed out that the EU could play a key role in promoting a unified set of international disclosure standards to make a common standard.
3. There was also strong support for stricter audit requirements, especially by users. Additionally, inclusion of company's materiality assessment should be within the scope of the auditors. Lastly, there were some concerns about the cost of the assurance.
4. The benefit of digitalization of non-financial information is believed to be useful if the non-financial information is tagged against standards. If measures are tagged, the non-financial information will be machine-readable to ensure accuracy and comparability. Lastly, the information should be available through a single access point to enhance its comparability, searchability and readability.
5. Many respondents want to further strengthen the materiality process disclosed by companies. The concept of dual materiality should be clarified and explicitly included in the directive. Especially the "outside-in" perspective had support but the "inside out" had more of a split opinion.

6. When it comes to the disclosure of the non-financial information there were different opinions on whether the report should be included in the managerial report or be in a separate report.
7. Most respondents agreed that the principle of proportionality should be kept in mind, especially for SME's. Moreover, equal treatments for companies who were the same size (i.e., if a company is listed or not should not be a factor). Lastly, a gradual increase in reporting obligation. However, there are some disagreements between different respondents.

As an answer to some of the listed flaws above, a new reporting directive was on the agenda.

Corporate Sustainability Reporting Directive (CSRD) was in effect January 5, 2023, and sets out different obligations and requirements for corporations to follow and replace the NFRD. The standards governing the social and environmental information companies must provide have been modernized and strengthened by this new directive. Around 11 700 companies will now be expected to report on sustainability (EU Commission, n. d). The new regulation has its purpose to guarantee that stakeholders and investors (also reporting on SFDR) have access to the data they need to evaluate the investment risks associated with climate change, social and other sustainability related challenges. This will also encourage transparency in how businesses affect the company and the environment by a double materiality assessment. Furthermore, by standardizing the information that must be disclosed, reporting costs for businesses over the medium to long term will decrease (EU Commission, n. d).

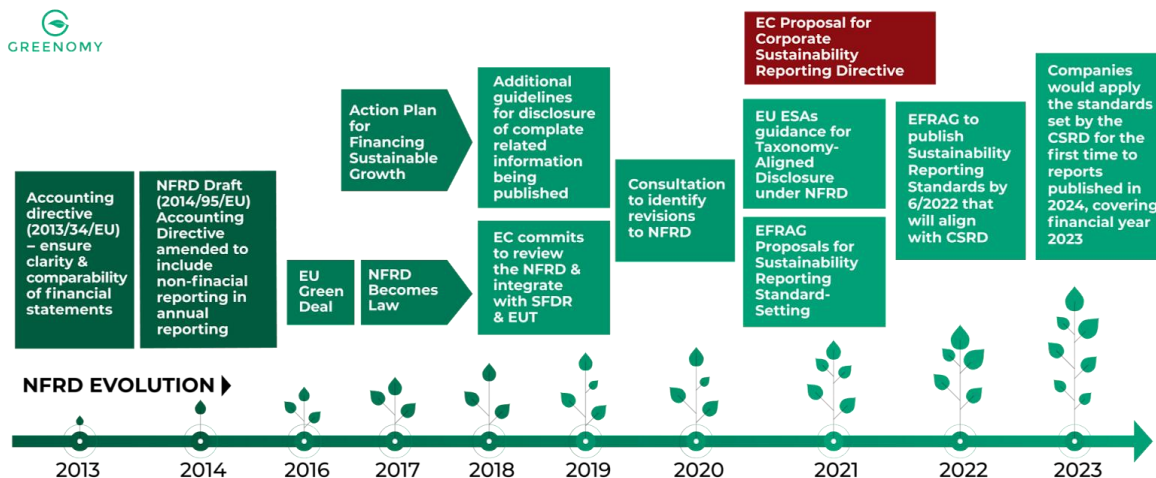


Figure 7: An illustration of NFRD evolution by Greenomy (Source: Noonan, 2021)

As a reporting guideline to comply with CSRD, EFRAG proposed the framework; ESRS Standards to help companies to report on obligations and requirements found under the CSRD which will be examined further in the next section.

ESRS Standards by EFRAG

Introduction

EFRAG got the task of carrying out a new mandatory guideline tool for corporations to follow to ensure compliance with the CSRD. The ESRS final draft was adopted by the EU Commission 31. July 2023 and is in effect 01. January 2024.

The entire spectrum of environmental, social, and governance concerns including human rights, biodiversity, and climate change are covered by the standards.

They provide information so that investors may comprehend how their investments will affect the sustainability of the companies they invest in.

Additionally, they consider the conversations that have taken place with (GRI) and the International Sustainability Standards Board (ISSB) to guarantee a high-level of interoperability between EU and international standards to avoid double reporting by companies (GRI, 2023).

Its scope has been set out by the flaws found in the literature and help the EU Green Deal achieve their goals (especially their goal of carbon neutrality) by improving the quality of reporting and to promote sustainable development for companies.

The ESRS framework is built up by the cross-cutting standards and topical standards which are sector-agnostic, meaning that they apply to all companies (EFRAG, 2023 P.3)

In this section, a broader explanation of the ESRS framework is presented.

Cross-Cutting Standards

ESRS1: General requirements

The mandatory guidelines for the preparation and disclosure of sustainability statements in compliance with the CSRD are found in ESRS 1. While it does not specify report content, ESRS 1 offers the framework for report preparation. The standard outlines reporting requirements for the value chain, time constraints and due diligence obligations. It also specifies how sustainability data must be gathered and presented. A materiality assessment of each standard is another requirement of ESRS 1 (Denkstatt, 2023) (EFRAG, 2023 p. 1-37).

ESRS 2: General Disclosures

The ESRS 2 is not subject to materiality and must be reported on regardless of the materiality assessment in ESRS 1. It specifies general characteristics such as measures, objectives, and policies for all companies to follow. Additionally, ESRS 2 specifies the content and structure for the Topic standards which can be divided into four disclosure areas; Metrics and targets, strategy, governance and management of impacts, opportunities, and risks (Denkstatt, 2023) (Efrag, 2023 P. 38-68.).

ESRS Topical Standards

There are 10 different topic standards which cover the ESG topics, and they describe specific sustainability data and information. All topic standards are listed below (EFRAG, 2023):

ESRS Topic standards	Topics	Description
ESRS E1	Climate change	Ensure climate change mitigation, adaptation, and energy
ESRS E2	Pollution	Mitigate, prevent, and remediate pollution to protect human health and the environment
ESRS E3	Water and marine resources	Ensure effective use of water and marine resources. Mitigate, prevent, or remediate actual impacts
ESRS E4	Biodiversity and Ecosystems	Mitigate, prevent and remediate actions to prevent loss of biodiversity and detriment of ecosystems
ESRS E5	Resource use and circular economy	Ensure effective use of materials and products
ESRS S1	Company own workforce	Ensure no discrimination and equal opportunities for everyone with good work conditions
ESRS S2	Workers in the value chain	Ensure no discrimination and equal opportunities for everyone with good work conditions
ESRS S3	Affected communities	Ensure social, economic and cultural rights, human rights and freedom

ESRS S4	Consumers, end-users	Ensure privacy of information, personal safety and social inclusion
ESRS G1	Business conduct	The specifics of an organization's principles, ethics, and beliefs, as well as the regulations and obligations that oversee legal compliance

Table 4: ESRS Topical Standards (Adopted from: EFRAG, 2023)

Topical standards cover a sustainability topic and are structured into topics and sub-topics, and where necessary sub-sub-topics. These sub-topics or sub-sub-topics can be found in AR 16 in the ESRS (EFRAG 2023, P.25-27). Lastly, the Sector and SME standards are under development by EFRAG and are not in the scope of this thesis.

[Differences Between GRI and ESRS Framework by EFRAG](#)

GRI launched their first sustainability framework in 2000 and has been developing their framework for over two decades. Being the most used framework for NFR, the ESRS has been influenced by GRI and one of their most fundamental difference is the perspective of materiality. In this section a content analysis (from Chapter 2) will be conducted to further look into how they differ in omission rules and materiality.

In late august this year, GRI and EFRAG published a joint statement of interoperability (GRI 2023). This statement confirms that they have achieved a prominent level of interoperability between their different standards in relation to impact reporting. This fixes the issue of double reporting which results in a more friendly and non-complex way of reporting for companies to comply with the new double materiality assessment found in CSRD (GRI 2023).

GRI has been an important part of the process for EFRAG`s development of the ESRS framework and has leveraged their expertise. By adopting GRI`s impact materiality definition, disclosure, and concepts, the ESRS and GRI framework will be closely or fully aligned when it comes to determining the impact materiality companies need to assess. Furthermore, ESRS 1 (§114) and ESRS 2 (§15) allows the adoption and referencing with the use of other reporting frameworks which are not covered by their standards such as tax, making it possible for companies to have more streamlined reporting practices with cross-references. GRI and EFRAG are still working together to further advance their technical cooperation in the future (GRI 2023).

However, they still differ in some aspects to materiality and omissions, and in this section a closer look into their differences is conducted. Notably, they differ in other aspects but it is not in the scope of this thesis.

Omission

In GRI you can omit all disclosure except for GRI 1, and GRI 2: 2-1 - 2-5 if you follow one of the four rules of omission (GRI Foundation, 2021). In the ESRS framework, however, companies can only omit the Topical Standards not part of the minimum disclosure requirements found in ESRS 2 General disclosure (EFRAG, 2023).

Rules of omission are listed under for being aligned;

ESRS rules for omission	Required explanation	GRI rules for omission	Required explanation
If materiality is not applicable	Companies may disclose a brief explanation of why the topic is not material (ESRS1 31)	If materiality is not applicable	Companies must explain why the disclosure, or the requirement is considered not applicable
If material but no policies in place	Companies must report a timeframe in which it aims to have these in place	Legal Prohibitions	Companies must describe the specific legal prohibitions
If the Disclosure Requirements is not material for metrics	Does not have to disclose DR`s or related data points	Confidentiality constraints	Companies must describe the specific confidentiality constraints
If the individual datapoints is not material	Does not have to disclose data points	Information unavailable / incomplete	Specify which information is unavailable or incomplete. When the information is incomplete, specify which part is missing (i.e. specify the entities for which the information is missing). Explain why the required information

			is unavailable or incomplete. Describe the steps being taken and the expected time frame to obtain the information.
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Table 5: Differences in Omission between GRI Standards and the ESRS Standards: (Own creation, adopted from (EFRAG, 2023) (GRI Foundation, 2021).

The Concept of Materiality

The materiality assessment narrows the reporting burden of the companies by omitting standards which are not subject to materiality. However, the companies need to disclose why it's not subject to materiality.

The concept of double materiality is the basis of the materiality assessment in accordance with ESRS 1 and the reporting of ESRS Topical standards.

In double materiality, companies need to look at their sustainability aspects in two perspectives. Firstly, they need to look at the inside-out perspective. This perspective is also called impact materiality which means that companies need to disclose how their value chains, operations and activities impact all external stakeholders and the environment. Secondly, companies also need to consider the financial materiality on sustainability topics which outlines how sustainability impacts the financial prospects and performance of a company, this is also called outside-in perspective (Täger, 2021) (Denkstatt, 2023) (Efrag, 2023 p.8-21). Illustrated below:

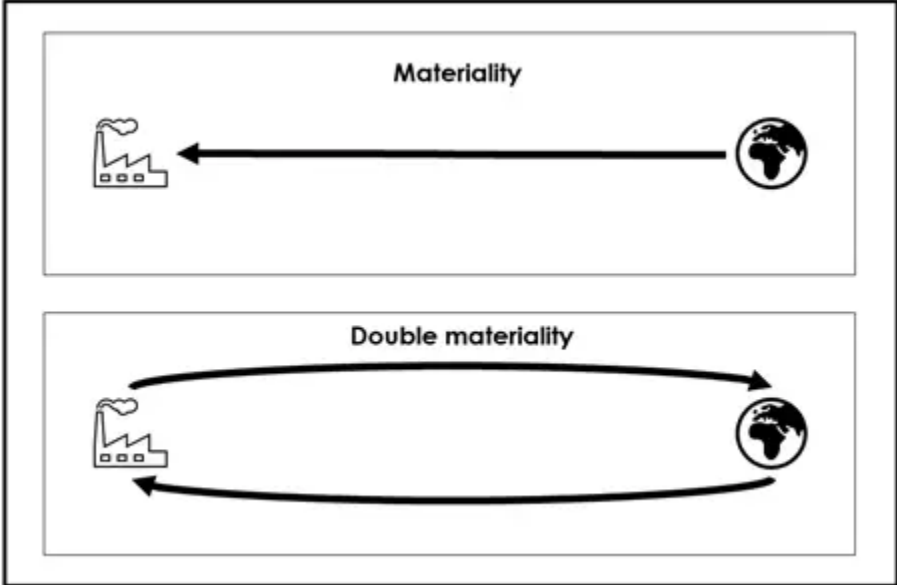


Figure 8: Conceptualized differences in materiality approach (Source: Täger, 2021)

Furthermore, to clarify the two perspectives; if a company is facing physical risks in climate change due to harsh weather this can impact the assets or value chain either directly or

indirectly. Another example is financial risk, which may lead companies to lose value due to a shift into the greener economy. The climate regulations may also force companies to adopt new products. Looking from the other perspective, companies need to measure their greenhouse gases to evaluate their impacts on the environment.

Companies' sustainability efforts are often a topic for prioritization, i.e: which efforts should be conducted, which information should be disclosed, and which chosen measures should be implemented.

However, even though practitioners and academics have a widespread agreement that materiality matters for companies, the concept of materiality deem to cause some confusion for companies because there are tensions between the different stakeholders of a company. Jørgensen et al., (2022) citing, Adams et al. (2020, p. 9) defines what is categorized as "material" by the company's ability to impact two distinct aspects;

1. Stakeholders concerning the company's positive and negative impacts on the global SDGs' achievement.
2. Providers of financial the company's capacity to produce long-term value for society and the company itself.

Jørgensen et al., (2022) quoting GRI Standards definition of material sustainability information as; "those topics that have a direct or indirect impact on an organization's ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society at large". Materiality assessments done by companies are often visualized through a "materiality matrix" such as the conceptualization of the materiality definition of GRI:

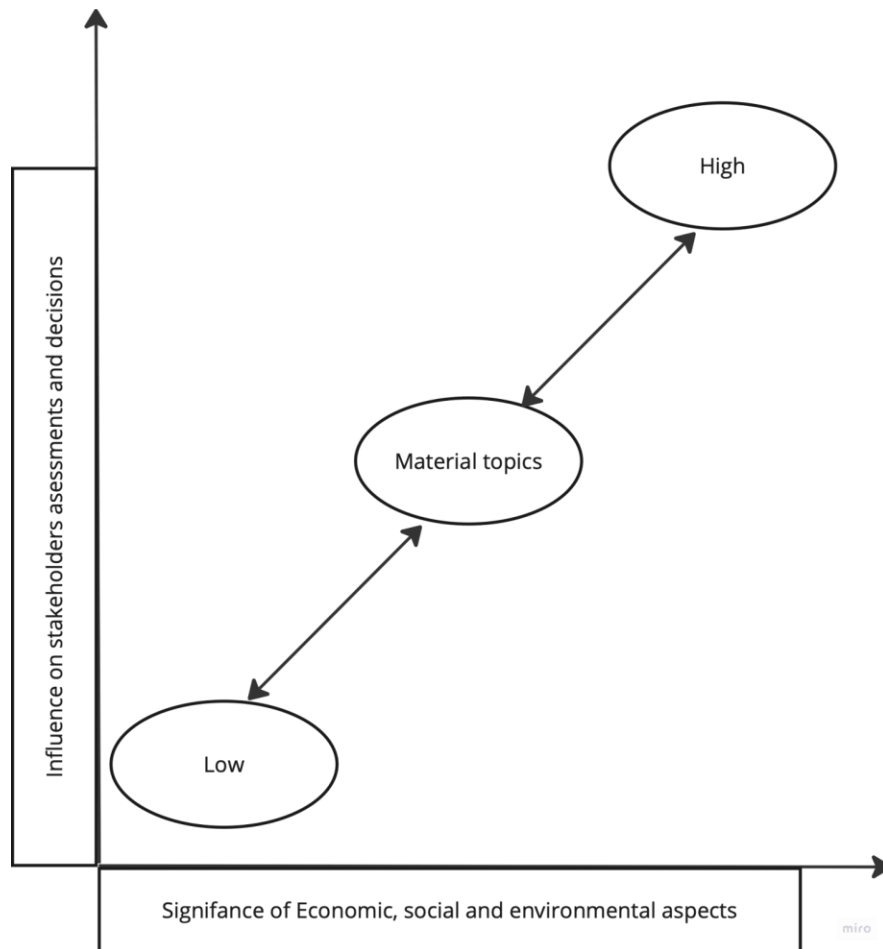


Figure 9: GRI impact materiality approach. Adopted from: (Jørgensen et al., 2021)

Furthermore, such visualization of materiality can work as a “taxonomy guideline” for companies in their NFR. The matrix allows companies to assess different types of stakeholders and the sustainability indicators connected to them. Consequently, such analysis can be insightful for sustainability strategy, measurements to implement and reporting on sustainability performance (Whitehead, 2017).

Another type of materiality dimension which has received some attention in recent years is *dynamic* materiality which reflects the timing dimension in materiality, especially financial materiality. Highlighted by Kuh et al. (2020, p.13) and referenced by Jørgensen et al. (2021), it is emphasized that as companies more rapidly change their business models, what is material to these companies will be changing in steps. Just as the new material topics will emerge for companies as the company evolves, some sustainability issues that previously were financially material to companies will no longer be. This fluid nature of materiality, wherein the significance of sustainability issues to companies and stakeholders, as well as their impacts, can shift over time, underscores the need for dynamic approaches to materiality, as opposed to static ones (Jørgensen et al. 2021). Jones et al (2016) show in various degree, the chosen companies studied have initially implemented GRI Standards on materiality and that many of the high-priority material issues highlighted by these firms

focus more on business continuity rather than on issues related to environmental sustainability.

Moreover, Cristofaro and Gulluscio (2022) discovered that from 2019 to 2021, only a small number of companies, predominantly European and in the service sector actively engaged in double materiality, particularly in the 2021 NFR. These firms knowingly adopted double materiality practices, though their methods and the degree of their application varied. Nevertheless, the majority of the companies studied appeared to overlook this approach to materiality. The researchers speculate that many companies are possibly waiting for further development in the latest European sustainability reporting framework, which is evolving to incorporate the ESRS Standards before moving forward with a more robust implementation.

Chapter 4: Empirical Analysis and Results

Remembering the Measurement System from Chapter 2, this chapter will first show present how the empirical analysis has been conducted.

Methodological Framework in Empirical Analysis

In this section, the methodological framework is explained. This section has its purpose to analyze and evaluate a benchmark for quality in NFR. The different frameworks (GRI, ESRS framework and SDG`s) share many similarities because they all focus on ESG disclosure topics. The first phase of the suggested technique focuses on choosing relevant disclosure issues to evaluate the quality of SDG and ESRS related data included in company

sustainability-reports. To do this, GRI's Material Topic standards is used. By connecting GRI Material Topic to both the SDG`s and ESRS Topical Standards we can create a Sustainability Disclosure Matrix (SDM) (Tsalis et al., 2020). The SDM will be analyzed using the 3-point scoring system explained in Chapter 2 to create an effective benchmark-scoring technique for NFR quality and keeping in mind the definition of "quality" in chapter 1.

Sustainability Disclosure Matrix GRI and SDG`s

Connecting the GRI towards SDG`s has been done by UN Global Compact and WBCSD (2017). GRI has updated the version as the framework has been developed throughout the years, the 2021 update being the latest version. Since this thesis shows how the quality in reporting has changed over the years, the UN Global Compact and WBCSD (2017) are used to evaluate both 2018 and 2022 GRI reports. The SDM is a list of GRI disclosures that relate to specific aspects of the company's operation that are closely related to the objectives of each SDG. 206 disclosure topics are used to evaluate company sustainability reports in relation to the SDGs, despite GRI guidelines suggesting 77 disclosure topics (GRI Standards, 2021). As a result, many of the GRI topics are used to evaluate how the quality of a company reporting practices more than once per SDG. Nine SDGs have more than twelve disclosure subjects, with an average of about twelve disclosure topics per SDG. SDG 8 has the highest number of disclosure topics (34), whereas SDG 9 includes two topics (Tsalis et al., 2020). To make a fair comparison between the two reports GRI (2018 and 2022): 419-1 is removed from SDG 16 since it is not part of the Topic standards in the updated guideline for GRI but rather moved to GRI general disclosure: 2-27. Illustration is shown below:

SDGs	Number of disclosure indicators	Disclosure topics by using GRI's codification	Number of disclosure topics
SDG 1	7	201-1, 201-3, 202-1, 202-2, 203-2, 413-2	6
SDG 2	8	201-1, 203-1, 203-2, 206-1, 411-1, 413-2, 416-1, 416-2,	8
SDG 3	13	203-2, 305-1, 305-2, 305-3, 305-6, 305-7, 306-1, 306-	13

		2, 306-3, 306-4, 401-2, 403-2, 403-3	
SDG 4	10	205-2, 404-1, 404-2, 404-3, 410-1, 412-2	6
SDG 5	9	201-1, 202-1, 203-1, 401-1, 401-2, 401-3, 404-1, 404-3, 405-1, 405-2, 406-1, 414-1, 414-2	13
SDG 6	8	303-1, 303-2, 303-3, 304-1, 304-2, 304-3, 304-4, 306-1, 306-2, 306-3, 306-5	11
SDG 7	5	201-1, 203-1, 302-1, 302-2, 302-3, 302-4, 302-5	7
SDG 8	12	201-1, 201-3, 202-1, 202-2, 203-2, 204-1, 301-1, 301-2, 301-3, 302-1, 302-2, 302-3, 302-4, 302-5, 303-3, 401-1, 401-2, 401-3, 402-1, 403-1, 403-2, 403-3, 403-4, 404-1, 404-2, 404-3, 405-1, 405-2, 406-1, 407-1, 408-1, 409-1, 414-1, 414-2	34
SDG 9	8	201-1, 203-1	2
SDG 10	10	201-1, 202-1, 203-1, 203-2, 204-1, 205-1, 205-3, 401-1, 404-1, 404-3,	13

		405-2, 406-1, 412-3	
SDG 11	10	203-1, 413-1, 413-2	3
SDG 12	11	204-1, 301-1, 301-2, 301-3, 302-1, 302-2, 302-3, 302-4, 302-5, 303-3, 305-1, 305-2, 305-3, 305-4, 305-6, 305-7, 306-1, 306-2, 306-3, 306-4, 308-1, 308-2, 417-1	23
SDG 13	5	201-2, 302-1, 302-2, 302-3, 302-4, 302-5, 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7	13
SDG 14	10	304-1, 304-2, 304-3, 304-4, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7, 306-1, 306-3, 306-5	13
SDG 15	12	303-1, 303-2, 304-1, 304-2, 304-3, 304-4, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7, 306-1, 306-2, 306-3, 306-5	16
SDG 16	12	205-1, 205-2, 205-3, 206-1, 307-1, 406-1, 408-1, 410-1, 411-1, 412-1, 412-2, 412-3, 414-1, 414-2, 415-1, 416-2, 417-1, 417-2, 417-3, 418-1	20

SDG 17	19	201-1, 203-1, 203-2, 413-1, 413-2,	5
Total number	169		206
Average	10		12

Table 6: GRI linked to SDG`s, Adopted from (Tsalis et al., 2020) without 419-1

Sustainability Disclosure Matrix GRI and ESRS

Connecting the GRI Material Topics towards ESRS Topical Standards has been done by assessing the report; "GRI's technical position on the draft European Sustainability Reporting Standards" with some alterations. The main difference is found in ESRS E4 Biodiversity and ecosystems because GRI 304 was undergoing a revision, the decision was made to use: 304-1, 304-2, 304-3, 304-4 found in the latest GRI (2021). Furthermore, since the report was based on the first draft, the indicators attached to G1 and G2 were merged into G1 because of the changes from the draft to the final version of the ESRS framework. This results in 74 disclosure topics used to evaluate company sustainability reports in relation to the ESRS framework. Following the same logic as the SDM for GRI with SDG`s, some of the GRI Topic standards are used more than once.

ESRS	Number of disclosure indicators	Disclosure indicators by using GRI's codification	Number of disclosure topics
ESRS E1	9	201-2, 302-1, 302-2, 302- 3, 302-5, 305-1, 305-2, 305-3, 305-4, 305-5	10
ESRS E2	6	303-1, 303-2, 303-4, 305-6, 305-7,	9

		306-2, 306-3, 306-4, 306-5	
ESRS E3	5	303-1, 303-2, 303-4, 303-5	4
ESRS E4	6	304-1, 304-2, 304-3, 304-4	4
ESRS E5	5	301-1, 301-2, 303-3, 306-2, 306-3, 306-4, 306-5	7
ESRS S1	17	401-3, 401-2, 402-1, 403-1, 403-2, 403-8, 403-9, 403-10, 403-4, 404-1, 404-2, 404-3, 405-2, 406-1,	14
ESRS S2	5	413-1, 413-2, 414,1, 414-2	4
ESRS S3	5	203-1, 411-1, 413-1, 413-2,	4
ESRS S4	5	416-2, 417-2, 417-3, 418-1	4
ESRS G1	6	201-1, 201-2, 201-3, 201-4, 202-1, 202-2, 203-1, 203-2, 204-1,205-1, 205-2, 206-1, 405-1, 415-1	14
Total number	69		74
Average	6,9		7,4

Table 7: GRI Material Topics linked to ESRS Topical Standards (Source: Authors own creation, based on the assessment of (GRI Standards 2021), EFRAG, 2023) and GRI ´s technical position of the ESRS first draft (GRI, 2022)

Total Accountability Indicator

As a next step, the "Total Accountability Indicator " (TAI) is suggested to assess the quality of reported information at SDG Topic level and ESRS Topic level. It is estimated as the sum of the scores of each disclosure topic proposed for a specific ESRS SDG and ESRS E, S and G requirement (Equation 1) (Tsalis et al.,. 2020):

$$TAI = \sum_{j=1}^n AIn,$$

Table 8: The SDG max score of TAI is listed down below: (Source own creation)

SDGs	Number of disclosure topics	TAI _{max}	SDGs	Number of disclosure topics	TAI _{max}
SDG 1	6	12	SDG 10	13	26
SDG 2	8	16	SDG 11	3	6
SDG 3	13	26	SDG 12	23	46
SDG 4	6	12	SDG 13	13	26
SDG 5	13	26	SDG 14	13	26
SDG 6	11	22	SDG 15	16	32
SDG 7	7	14	SDG 16	20	40
SDG 8	34	68	SDG 17	5	10

SDG 9	2	4		
Total	206	412		

Table 9: We use the same Equation (1) for ESRS E, S, G TAI: (Source: own creation)

ESRS E, S, G	Number of disclosure topics	TAI_{max}
ESRS E1	9	18
ESRS E2	9	18
ESRS E3	4	8
ESRS E4	4	8
ESRS E5	7	14
ESRS S1	15	30
ESRS S2	5	10
ESRS S3	4	8
ESRS S4	4	8
ESRS G1	5	14
Total	69	148

Table 10: Assessment-scorecard of a report on SDG´s is listed below as an exemplated assesment: (source: own creation)

Firm	Industry: Food (Orkla)	Company G		Assessed by: Author of master thesis	
Type of report	Annual report + GRI Content	Report 2			
Year of publication	2022				
UN_SDGs	TAI	UN_SDGs	TAI	GRI Disclosure 1-9	GRI Disclosure 10-17
UN_SDG_1	2+2+2+0+2 = 8	UN_SDG_1 0	2+0+2+0+2 +0+2+2+2+ 2+0+2+0 = 16	201-1, 201-3, 202-1, 202-2, 203-2, 413-2	201-1, 202-1, 203-1, 203-2, 204-1, 205-1, 205-3, 401-1, 404-1, 404-3, 405-2, 406-1, 412-3
UN_SDG_2	2+2+0+2+0 +2+2+2 = 12	UN_SDG_1 1	2+2+2 = 6	201-1, 203-1, 203-2, 206-1, 411-1, 413-2, 416-1, 416-2,	203-1, 413-1, 413-2
UN_SDG_3	0+2+2+2+2 +2+2+2+2+ 1+0+2+2 = 21	UN_SDG_1 2	2+2+2+0+2 +0+2+0+0+ 1+2+2+1+2 +2+2+2+2+ 2+1+2+2+2 = 35	203-2, 305-1, 305-2, 305-3, 305-6, 305-7, 306-1, 306-2, 306-3, 306-4, 401-2, 403-2, 403-3	204-1, 301-1, 301-2, 301-3, 302-1, 302-2, 302-3, 302-4, 302-5, 303-3, 305-1, 305-2, 305-3, 305-4, 305-6, 305-7, 306-1, 306-2, 306-3, 306-4, 308-1, 308-2, 417-1
UN_SDG_4	2+2+2+2+0 +0 = 8	UN_SDG_1 3	2+2+0+2+0 +0+2+2+1+ 2+2+2+2 = 19	205-2, 404-1, 404-2, 404-3, 410-1, 412-2	201-2, 302-1, 302-2, 302-3, 302-4, 302-5, 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7

UN_SDG_5	2+0+2+2+0 +0+2+2+2+ 1+2+2+2 = 19	UN_SDG_1 4	0+1+0+0+2 +2+1+2+2+ 2+2+2+1 = 17	201-1, 202- 1, 203-1, 401-1, 401- 2, 401-3, 404-1, 404- 3, 405-1, 405-2, 406- 1, 414-1, 414-2	304-1, 304- 2, 304-3, 304-4, 305- 1, 305-2, 305-3, 305- 4, 305-5, 305-7, 306- 1, 306-3, 306-5
UN_SDG_6	2+2+2+0+2 +0+0+2+2+ 2+1 = 15	UN_SDG_1 5	2+2+0+1+0 +0+2+2+1+ 2+2+2+2+2 +2+2 = 24	303-1, 303- 2, 303-3, 304-1, 304- 2, 304-3, 304-4, 306- 1, 306-2, 306-3, 306- 5	303-1, 303- 2, 304-1, 304-2, 304- 3, 304-4, 305-1, 305- 2, 305-3, 305-4, 305- 5, 305-7, 306-1, 306- 2, 306-3, 306-5
UN_SDG_7	2+2+2+0+2 +0+0 = 8	UN_SDG_1 6	0+2+2+2+0 +2+2+0+0+ 0+0+0+2+2 +2+2+0+2+ 2+2+2 = 28	201-1, 203- 1, 302-1, 302-2, 302- 3, 302-4, 302-5	205-1, 205- 2, 205-3, 206-1, 307- 1, 406-1, 408-1, 410- 1, 411-1, 412-1, 412- 2, 412-3, 414-1, 414- 2, 415-1, 416-2, 417- 1, 417-2, 417-3, 418- 1
UN_SDG_8	2+2+0+2+0 +2+2+2+0+ 2+0+2+0+0 +1+2+0+0+ 2+2+2+2+2 +2+2+2+1+ 0+2+2+2+2 +2+2 = 48	UN_SDG_1 7	2+2+0+2+2 = 8	201-1, 201- 3, 202-1, 202-2, 203- 2, 204-1, 301-1, 301- 2, 301-3, 302-1, 302- 2, 302-3, 302-4, 302- 5, 303-3, 401-1, 401- 2, 401- 3, 402-1, 403-1, 403- 2, 403-3, 403-4, 404- 1, 404-2, 404-3, 405- 1, 405-2, 406-1, 407- 1, 408-1, 409-1, 414- 1, 414-2	201-1, 203- 1, 203-2, 413-1, 413- 2,
UN_SDG_9	2+2 = 4			201-1, 203- 1	

Table 11: Assessment-scorecard of a report on ESRS E, S, G is listed below as an exemplated assesment: (source: own creation)

Firm		Company H		Assessed by: Author of master thesis	
Type of report	Annual report + sustainability report + GRI index 2022				
Year of publication	2022				
ESRS	TAI		TAI	GRI Disclosure ESRS E1 - E5	GRI Disclosure ESRS S1 - S4, G1
ESRS E1	0+1+0+0+0+2+2+2+2+2 = 11	ESRS S1	0+0+0+2+1+2 = 5	201-2, 302-1, 302-2, 302-3, 302-5, 305-1, 305-2, 305-3, 305-4, 305-5	401-2, 401-3, 402-1, 403-1, 403-2, 403-4, 403-8, 403-9, 403-10, 404-1, 404-2, 404-3, 405-2, 406-1,
ESRS E2	0+2+1+0+2+2+2+1+1 = 11	ESRS S2	1+2+2+1 = 6	303-1, 303-2, 303-4, 305-6, 305-7, 306-2, 306-3, 306-4, 306-5	413-1, 413-2, 414, 1, 414-2

ESRS E3	0+2+1+2 = 5	ESRS S3	0+1+1+2 = 4	303-1, 303-2, 303-4, 303-5	203-1, 411-1, 413-1, 413-2,
ESRS E4	1+1+1+1 = 4	ESRS S4	2+0+0+0 = 2	304-1, 304-2, 304-3, 304-4	416-2, 417-2, 417-3, 418-1
ESRS E5	0+0+2+2+ 2+1+1 = 8	ESRS G1	2+0+0+2+ 2+0+0+0+ 0+1+1+0+ 2+0 = 10	301-1, 301-2, 303-3, 306-2, 306-3, 306-4, 306-5	201-1, 201-2, 201-3, 201-4, 202-1, 202-2, 203-1, 203-2, 204-1,205- 1, 205-2, 206-1, 405-1, 415-1

Furthermore, we will calculate the DQPI for both SDG and ESRS on all eight companies using these equations:

Adopted from Tsalis et al., (2020):

Equation 2 (a):

$$DQPI = \sum_{j=1}^{17} TAI_j,$$

Equation 2 (b):

$$DQPI = \sum_{j=1}^{10} TAI_j,$$

Lastly, we will calculate the QSDG and QESRS with:

Equation 3 (a):

$$SDGQ_j = \frac{ATAI_j}{TAI_{jmax}}$$

Equation 3 (b):

$$ESRSQ_j = \frac{ATAI_j}{TAI_{jmax}}$$

Lastly the difference between 2018 and 2022:

Equation 4:

$$SDGQ_{j2022} - SDGQ_{j2018} = ESDGQ$$

ESDGQ = Evolution in SDGQ from 2018 to 2022.

Results

In this section the results from the empirical analysis are shown. Firstly, the results regarding materiality and omission on materiality is shown. Secondly, the QSDG and CQSDG in both 2018 and 2022. thirdly, the differences between 2018 and 2022 are presented. Lastly, the result of the QESRS and CQESRS in 2022. On the right side of the table the decimals show the result of each SDG`s and ESRS Topical quality, and the bottom line shows the average quality for each firm. on company level.

Results From The Holistic Approach On Materiality And Omission

Table 12: source (own creation)

Name of the company	Norsk Hydro	Moelven ASA	Telenor ASA	DNB ASA	Vår Energi	Yara	Orkla	Elkem
Sustainability report	2022	2022	2022	2022	2022	2022	2022	2022
Materiality approach	Using the GRI approach, also consider risks on their operations but no mention of double materiality	GRI approach, also consider risks and opportunities on their operations.	States that all of their materiality assesment has been done by a double materiality approach.	TCFD approach on financial materiality and a combination of GRI and SASB impact materiality. Mentions the approach of moving to double materiality in 2023.	Using the GRI approach and also SASB assesment. TCFD is used in their materiality assesment. No mention of double materiality	States that all of their materiality assesment has been done by a double materiality approach.	States that all of their materiality assesment has been done by a double materiality approach.	Using the GRI approach, also consider risks on their operations.
Stakeholder perspective	Multi-stakeholder perspective	Multi-stakeholder perspective	Multi-stakeholder perspective	Multi-stakeholder perspective	Multi-stakeholder perspective	Multi-stakeholder perspective	Multi-stakeholder perspective	Multi-stakeholder perspective
Omission	Omission slightly explained	Mostly no explanation of omission	Mostly no explanation of omission	Mostly no explanation of omission	Mostly no explanation of omission	Omission slightly explained	Mostly no explanation of omission	Mostly no explanation of omission
SDG's	Focus on SDG's	Focus on SDG's	Focus on SDG's	Focus on SDG's	Focus on SDG's	Focus on SDG's	Focus on SDG's	Focus on SDG's

Results CQSDG and QSDG 2018

Table 13: The result of CQSDG and QSDG in 2018: (source: own creation)

Year of publication: 2018-2019									
	Norsk Hydro	Moelven ASA	Telenor ASA	DNB ASA	Vår Energi	Yara	Orkla	Elkem	Average QSDG

SDG									
SDG_1	0,75	0	0,5	0	0	0,583	0,166	0	0,2498
SDG_2	0,625	0	0,625	0	0	0,3125	0,375	0	0,2421
SDG_3	0,807	0,363	0,384	0	0,23	0,692	0,538	0,23	0,4055
SDG_4	0,75	0	0,416	0,411	0,083	1	0,666	0,25	0,447
SDG_5	0,954	0	0,4615	0,153	0,077	0,692	0,615	0,384	0,417
SDG_6	0,909	0,0909	0	0	0,181	0,409	0,363	0,0909	0,2554
SDG_7	0,857	0,2857	0,714	0	0,285	0,285	0,428	0,285	0,3924
SDG_8	0,794	0,147	0,397	0,103	0,167	0,602	0,411	0,264	0,36
SDG_9	1	0	1	0	0	0,25	0,5	0	0,34375
SDG_10	0,923	0	0,461	0,192	0,038	0,73	0,538	0,307	0,3986
SDG_11	0,833	0	0,333	0	0	0,33	0,33	0	0,229
SDG_12	0,717	0,304	0,413	0,043	0,195	0,652	0,695	0,217	0,4045
SDG_13	0,884	0,384	0,615	0,0769	0,346	0,653	0,692	0,23	0,456
SDG_14	0,884	0,307	0,384	0,0769	0,384	0,73	0,538	0,153	0,4321
SDG_15	0,968	0,3125	0,3125	0,0625	0,3125	0,656	0,562	0,125	0,4138

	Norsk Hydro	Moelv en ASA	Telenor ASA	DNB ASA	Vår Energi	Yara	Orkla	Elkem	Avarage QSDG
SDG									
SDG_1	0,8333	0	0,5833	0	0,5833	0,6666	0,6666	0,5	0,4791
SDG_2	0,75	0,125	0,6875	0	0,75	0,875	0,75	0,5	0,5546
SDG_3	0,923	0,5384	0,3846	0,2307	0,7307	0,9230	0,8076	0,6538	0,6489
SDG_4	0,8333	0	0,6666	0,3333	0,4166	0,75	0,6666	0,25	0,4895
SDG_5	0,846	0	0,5384	0,3076	0,7692	0,8461	0,7307	0,5769	0,5768
SDG_6	0,954	0,0909	0	0	0,7727	0,7272	0,6818	0,6818	0,4885
SDG_7	0,857	0,4285	0,7142	0	0,5714	0,4285	0,5714	0,2142	0,4731
SDG_8	0,853	0,147	0,5735	0,0882	0,6764	0,8235	0,7058	0,4791	0,5433
SDG_9	1	0	1	0	0,75	0,5	1	0,5	0,5937
SDG_10	0,923	0,07692	0,6153	0,1538	0,6538	0,9166	0,6153	0,4230	0,5472
SDG_11	0,667	0	0,8333	0	0,833	0,6667	1	0,5	0,5625
SDG_12	0,847	0,3478	0,413	0,1739	0,5434	0,6521	0,7608	0,5	0,5297
SDG_13	0,884	0,5384	0,6153	0,3076	0,6538	0,7692	0,7307	0,5	0,6248

SDG_14	0,961	0,4615	0,3846	0,3076	0,6153	0,8846	0,6538	0,8076	0,6345
SDG_15	0,968	0,4375	0,3125	0,25	0,7812	0,90625	0,75	0,7812	0,6483
SDG_16	0,6	0,15	0,45	0,15	0,475	0,725	0,7	0,25	0,4375
SDG_17	0,7	0	0,9	0	0,8	0,6	0,8	0,5	0,5375
Average CQSDG	0,847	0,1965	0,5689	0,1354	0,6691	0,744	0,7406	0,5069	0,5511

From the table, we can see that Norsk Hydro has the highest CQSDG with 84.7%. The lowest score is for DNB, with 13.54%. The overall QSDG of the eight companies investigated in 2022 is 55.11%, with SDG 3 having the highest score of 64.89%, and the lowest score going to SDG 16.

Results in NFR quality from 2018 – 2022

Table 16: Shows the changes in NFR quality from 2018 to 2022 in CQSDG and QSDG: (source: own creation)

Difference from year 2018-2022									
	Norsk Hydro	Moelven ASA	DNB ASA	Telenor ASA	Vår Energi	Yara	Orkla	Elkem	Average Difference SDG
SDG									
SDG_1	0,0833	0	0,0833	0	0,5833	0,0836	0,5006	0,5	0,229
SDG_2	0,125	0,125	0,0625	0	0,75	0,5625	0,375	0,5	0,315
SDG_3	0,116	0,1754	0,0006	0,2307	0,5007	0,231	0,2696	0,4238	0,243
SDG_4	0,0833	0	0,2506	-0,0777	0,3336	-0,25	0,0006	0	0,0425
SDG_5	-0,108	0	0,0769	0,1546	0,6922	0,1541	0,1157	0,1929	0,1598
SDG_6	0,045	0	0	0	0,5917	0,3182	0,3188	0,5909	0,233
SDG_7	0	0,1428	0,0002	0	0,2864	0,1435	0,1434	-0,0708	0,0806
SDG_8	0,059	0	0,1765	-0,0148	0,5094	0,2215	0,2948	0,2151	0,1826
SDG_9	0	0	0	0	0,75	0,25	0,5	0,5	0,25

SDG_10	0	0,07692	0,1543	-0,0382	0,6158	0,1866	0,0773	0,116	0,1485
SDG_11	-0,166	0	0,5003	0	0,833	0,3367	0,67	0,5	0,334
SDG_12	0,13	0,0438	0	0,1309	0,2309	0,0001	0,0658	0,283	0,1105
SDG_13	0	0,1544	0,0003	0,2307	0,3078	0,1162	0,0387	0,27	0,1397
SDG_14	0,077	0,1545	0,0006	0,2307	0,2313	0,1546	0,1158	0,6546	0,203
SDG_15	0	0,125	0	0,1875	0,4687	0,25025	0,188	0,6562	0,2344
SDG_16	0	0	-0,125	0	0,4	0,175	0	0	0,056
SDG_17	0	0	0,3	0	0,8	0,2	0,6	0,5	0,3
Average difference CQSDG	0,0261	0,058	0,087	0,060	0,522	0,1843	0,2514	0,343	0,1918

From the table, we can see that the company with the highest increase is Vår Energi with 52.2% followed by Orkla with 25,14%. The lowest change is found in Norsk Hydro with 2.61%. The overall increase in QSDG is 19.18% whereas the most significant increase is found in SDG 11 with 33,4% and the lowest change being SDG 4 with 4.25%.

Results of CQESRS and QESRS

Table 17: Show the results of the average CQESRS and average QESRS on the 8 companies:

Year of publication: 2022	Norsk Hydro	Moelven ASA	Telenor ASA	DNB ASA	Vår Energi	Yara	Orkla	Elkem	Average QESRS
ESRS E, S, G									
ESRS E1	0,95	0,6	0,8	0,4	0,75	0,8	0,75	0,55	0,70
ESRS E2	1	0,444	0	0	0,722	0,888	0,833	0,611	0,56225
ESRS E3	0,875	0,25	0	0	0,875	1	0,875	0,625	0,5625
ESRS E4	0,875	0	0	0	0,5	1	0,25	0,5	0,39
ESRS E5	0,92	0,714	0	0	0,642	1	0,785	0,571	0,579
ESRS S1	0,82	0,07	0,642	0,143	0,821	0,928	0,785	0,178	0,548375
ESRS S2	0,625	0	0,75	0	1	0,75	1	0,75	0,609375
ESRS S3	0,75	0	0,75	0	0,975	0,375	0,75	0,5	0,5125
ESRS S4	0,75	0	0,25	0,375	0	0,75	1	0,25	0,421875

ESRS G1	0,928	0,07	0,714	0,107	0,821	0,714	0,857	0,357	0,571
Average CQES RS	0,8493	0,2685	0,39	0,1025	0,7106	0,82	0,7885	0,4892	0,545

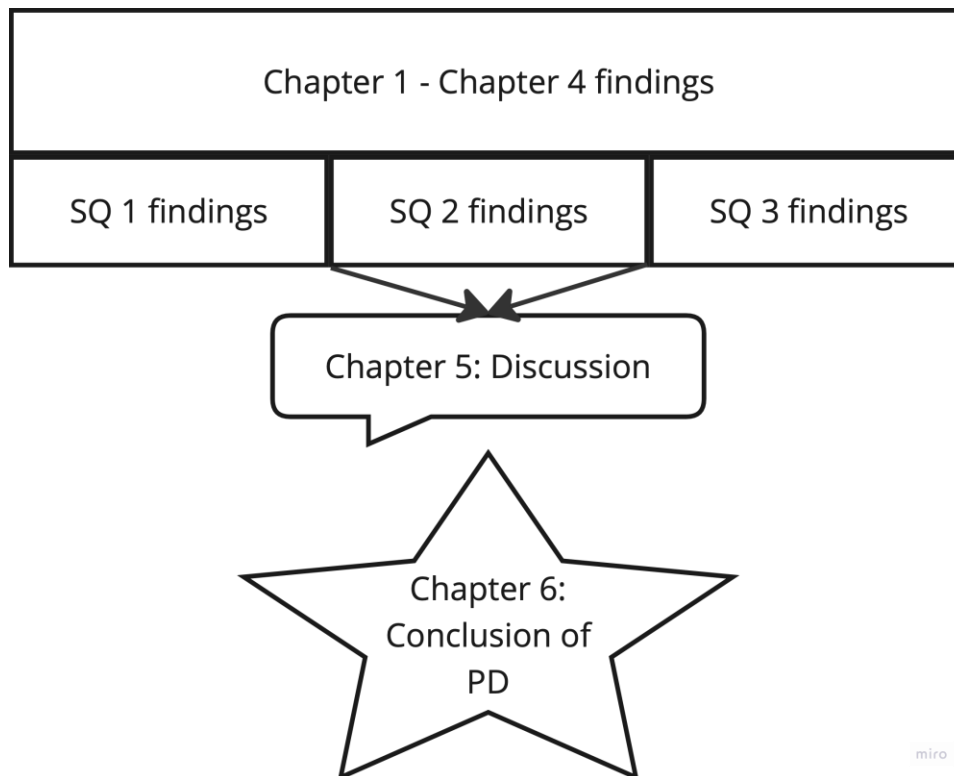
From the result, the topic level with the highest quality is found in ESRS E1 70% (climate change) and the lowest score is found in ESRS E4 39% (biodiversity and ecosystems). We can also find the companies with the highest score of 84.93% (Norsk Hydro) and the company with the lowest score of 10.25% (DNB). Norsk Hydro has the highest score in ESRS E1-E2 and G1. Yara scored the highest value in ESRS E3-E5 and S1. Orkla and Vår Energi both with 100% in ESRS S2. Lastly, Vår Energi scored the best in S3 and Orkla scored the best in ESRS S4.

Chapter 6: Discussion

Remembering the problem description introduced in **Chapter 1: Introduction:**

"What is the status of non-financial reporting for Norwegian companies and how does this position them towards the new CSRD implemented by the EU?"

In this Chapter, a discussion between the chapters used throughout the thesis will be performed to shed light on the sub-questions derived from the problem description. The discussion part will not systematically answer each sub-question on their own but rather discuss findings interweavingly and fluidly with each other. Reason being due to practical and logical reasons such as the similarities between the SQ 's, SQ 1 and SQ 2 in the way they are formulated, moreover SQ 3 gives additionally support to the problem description. An illustration of the logic presented for **Chapter 6: Discussion** is presented below:



(Source; own creation)

The most interesting findings in Chapter 1- Chapter 4 from the companies is discussed. All scores individually on companies regarding SDG 's and the ESRS Standards, the changes from 2018-2022 in SDG 's scores is not presented as they are outlined in Chapter 4. Even though there is no "benchmark" on what is categorized as good or bad quality in this results. However, for this discussion, Below 50% is considered as bad quality and over 50% considered as good.

Norsk Hydro (2022, p. 48) states "Hydro is exposed to a range of risks and hazards including critical equipment breakdowns, power failures and natural catastrophes that could result in disruptions to operations across our business areas" Furthermore, their impacts on society is also explained: "some operations are located close to sizable communities where operational events could also result in significant and potentially lasting impacts on the health and safety of employees, contractors, nearby communities as well as the environment. In addition, Hydro might be subject to claims, fines and further damage to our profitability or reputation". This indicates that to some degree they have double materiality view when assessing their materiality. However, there are no mention of the term "double materiality" which indicates that not all aspects of their materiality is assessed by an double materiality.

Yara (2022, p. 40): "In 2022, we deepened our approach to double materiality. This was done to ensure we prioritize and consistently manage the topics that matter to our success and to our stakeholders, and to prepare for upcoming regulatory requirements, notably the EU Corporate Sustainability Reporting Directive (CSRD)". This indicates that Yara try to approach the view of double materiality and seem to be motivated to ensure compliance towards the CSRD.

Moelven (2022, p.15) *translated from Norwegian*: "We also have certain important areas in order to determine which areas have the greatest importance both for Moelven and the stakeholder groups". Which indicates that the company do consider what is material based itself and stakeholders but no mention in the concept of double materiality. This statements seems to be much aligned to the definition of GRI and an assesment materiality matrix might have been used.

DNB, (2022, p. 34) states in their annual reports: "In 2023, we will conduct a new, comprehensive double materiality analysis, which will assess all areas where DNB has an impact". DNB currently also assess its materiality from TCFD. This gives them an upper hand when it comes to adressing the financial materiality. The other "types" of sustainability reports have not been in scope of this study which might explain the low score to some degree. However, their low score in this study might indicate that they should focus on fewer Standards/Frameworks of Sustainability to ensure comparability for stakeholders who seeks to gather their non-financial information. I.e: If a stakeholder want to compare the GRI report from DNB with GRI freport rom another bank this might put the the company in disadvantage because they use other types of reports to disclose their sustainability information.

Elkem (n, d): "Elkem the sustainability materiality at least once a year in accordance with the widely used reporting framework Global Reporting Initiative (GRI), but more

comprehensive materiality assessments are done every third year". Furthermore: "the dynamic material topics and their impact will be continuously evaluated by the ESG steering committee and approved by the board of Elkem annually." There are no indications that the company assesses their materiality in double materiality but rather the GRI and a dynamic material approach to their materiality assessment which is a good start. However, they will need to put in some work to ensure assessment on the financial material topics.

Orkla (2022, p. 189): states: "Orkla's sustainability strategy covers the topics considered particularly important for the group based on a double materiality assessment, in which both Orkla's impact on its surroundings and the commercial risk associated with sustainability challenges are considered. Through its sustainability work, Orkla's ambition is to contribute towards achieving the global sustainability goals, ensure effective risk management and exploit sustainability-related opportunities to create growth, trust and long-term profitability".

Vår energi (2022, p. 111): their auditor PWC states: "Vår Energi uses to measure and report its sustainability performance, together with a reference to where material sustainability information is reported. Vår Energi's GRI Index for 2022 is available and included in Vår Energi's Sustainability report for the period ending 31 December 2022". They do follow the principles of impact assessment with both GRI and SASB. Furthermore, TCFD approach on financial matters in climate change. No

Telenor (2022 p. 36): "Telenor performed a double-materiality assessment, supported by BSRTM - a sustainable business network and consultancy focused on creating a world in which all people can thrive on a healthy planet. The assessment was conducted in line with the European Union's Corporate Sustainability Reporting Directive (EU CSRD), the associated draft European Sustainability Reporting Standards (ESRS) and the guidance of the Global Reporting Initiative (GRI) 2021". This indicates that Yara try to approach the view of double materiality and seem to be motivated to ensure compliance towards the CSRD.

Since all companies chosen for this study report after the GRI standards, they have an upper hand on complying with the obligation found in CSRD. Reason being that impact materiality from the GRI standards follows the CSRD obligation on impact materiality. However, companies might consider a "dynamic approach" going forward to disclose their double materiality, especially regarding their financial materiality. Furthermore, using a materiality matrix in their analysis to assess which topics are material to itself and stakeholder in the aspect of impact and financial materiality this might be especially useful for the companies with low CQSDG and CQESRS.

Cicchiello et al, (2022) conclude that NFRD influenced ESG rating positively for European companies when compared to US companies. However, ESG rating is different from non-financial quality in a sense that consulting firms gather the non-financial information and put a score on the companies. Still, it can give some indications that institutional determinants such as law-making positively influence the companies' maturity in NFR practices. Furthermore, the study from Györi and Szigeti (2023) linked many of the same GRI indicators to the ESRS Standards as myself in this thesis. This is interesting to me because it is a good way to compare Norwegian companies to other nations. Their result

showed that there is lack of stakeholder engagement, intutional and assurance interventions which can explain the Hungarian companies low level of NFR quality.

Rosati and Faria (2019) highlighted the importance of institutional factors in non-financial reports that included SDGs by demonstrating that companies which reported about SDGs were most likely to be based in nations with prominent levels of national corporate social responsibility, individualism, and indulgence. Norway can be seen as a country with higher level of indivualism, indulgence and corporate social responsibility than Hungarian contries which supports the researchers claim.

Moreover, as seen in this thesis, companies have a strong emphasis on stakeholders when considering materiality. The same study also investigated SDG`s in companies showing that different sectors focus on different SDG`s which they see as logical because of the consequences of their different activities. This can be seen in line with the companies CQSDG`s and the avarage CQSDG on the different SDG`s. When looking at the CQSDG, the level of quality varies a lot as presented above.

As discovered by Diouf and Boiral (2017), stakeholder's opinions of NFR quality showed that GRI principles were vaguely implemented and frequently modified to meet the demands of stakeholders, I.e by omitting different GRI principles by poor explanations. Companies in this study also lacked explanation of omissions, especially the companies with low scores in both CQESRS and CQSDG. An explanation might be that companies tend to be focus on being transparent with their materiality assesment instead of explain why certain topics are omitted. To increase transparancy, better explanations on omitted topic disclosures should be considered. However, all companies in this study have a "multi-stakeholder" perspective which is aligned with the CSRD`s double materiality approach which might indicate a contradiction to material disclosure are modified to meet the needs of stakeholders. Consequently, this is a paradigm which is hard to evaluate for companies because the different stakeholders have different expectations from the company.

All the studied companies do integrate information about their work towards different sustainability goals. Which contradicts, Waal and Thjissens (2020) citing data from KPMG (2018), that 40% of the world's 250 largest companies incorporate the Sustainable Development Goals (SDGs) into their sustainability reports. However, from 2018 – 2022 there is an positive trend in almost all SDG`s which support their claim of companies rapidly implementing this. Lastly, the empirical analysis show that the studied companies SDG`s in various ways and their level of quality varied.

Norsk Hydro and Yara, being the two biggest firms, atleast from the point of view with the number of employees, confirms the result from the study by Hahn and Kühnen (2013) who studied articles in journals from 1999 to 2011 and point out that firm size and sector affiliation is a determinator of clear conclusions, firm size being supported by the master thesis from Christensen and Johansen (2022).

In Chang et al,. (2019) Their findings indicate that financial institutions in developed countries generally produce sustainability reports of better quality. In this study, DNB had the worst scores overall which contradict the study. However, not assessing all the information and being the only financial institution, the validity of this contradictment is vague.

Lastly, there has also been presented some scientific studies about NFR in Chapter 3 and in most academic literature, the term: "Non-financial report or non-financial information" are used as a term. However, after the implementation of CSRD, this questions the terminology of "non-financial" to be an accurate term going forward in academia because it implies that the information has no financial relevance . Increasingly focus on the double materiality, and the fact that both the CSRD and ESRS Standards use the terms: "sustainability reporting and sustainability information". This thesis suggest that non-financial should be replaced as it might be a misleading term going forward.

Importantly, this study does not use a statistical method such as regression to statistically confirm any determinators in which the empirical data from this study is discussed with the scientific studies.

Chapter 7: Conclusion, Limitations and Future research

Conclusion

Because of the scarce research on SDG's reporting quality and the newly implemented CSRD, this thesis sought to discover insights into 8 Norwegian companies status of NFR quality, their current status and their position towards CSRD. Even though these findings can not be generalized, it can give some indications on the current status of NFR quality and adding to the existing literature. Furthermore, this thesis narrows the scope of the problem description by capturing the status of NFR quality in SDG's, its change from 2018 to 2022 and the ESRS Topical Standards using the GRI Material Topic Standards by analysing annual reports and sustainability reports in a scoring system. Firstly, the findings show that the Norwegian Companies tends to disclose their non-financial information best on SDG 3, SDG 14 and SDG 15. Furthermore, their worst SDG's score were SDG 16, SDG 7 and SDG 1. Positively, the difference between 2018 – 2022 reports show an increase in 19,8% in overall score of the SDG's. Moreover, in the ESRS Topical Standards show the best disclosure quality in ESRS E1, ESRS S2 and ESRS E5. The quality with the lowest score were found in E4, S4 and S3. Lastly, an assesment of the companies materiality was conducted showing a diverse approach. 2 Companies already use double materiality in their materiality assesments. Furthermore, 1 company communicate double materiality in the next annual report. However, as presented in this thesis, all studied companies use the GRI materiality approach on impact which gives them an upper hand going forward. Explanation regarding omitted topic still seems scarcely presented.

Weakness/Limitations

This thesis has several limitations. Firstly, by only connecting the GRI Material Topic Standards to the ESRS Framework does not capture whole framework of GRI nor ESRS. Linking the frameworks is done in a broad manner which is due to the scope of the study and the results can not be generalized as to weather the companies actually are in compliance with the CSRD or not. Furthermore, the result of linking GRI Topical Standards to SDG's do not capture the entire GRI disclosures of the companies because GRI 2: Disclosures is an important part of the GRI Standards. Furthermore, only 8 companies were in scope of this thesis to give some insights into the status of norwegian companies NFR quality, and the conclusion of this study can not be generalized to the results of other norwegian companies.

Future Research

Future research of interest includes performing a similar research study but at a later stage. Next year, all of the companies in scope of this thesis will be obligated to report under the CSRD. Interestingly would be to analyze the same companies with the same measurement system (0-2 points). Furthermore, a case-study of a companies assesment on materiality and omission could have been an interesting master thesis for scholars. This could aid in minding the current gap in NFR and maturity of companies materiality assesment. Lastly, assessing and comparing companies in the same within the

same sector when the ESRS Sector Standards are implemented would be interestingly, especially to the financial market players who use non-financial information as a part of their investment strategy.

References:

Adams, C. A., Druckman, P. B., & Picot, R. C. (2020). Sustainable development goals disclosure (SDGD) recommendations. *ACCA: London, UK*.

Aluchna, M., Bohdanowicz, L., & Kaminski, B. (2023). Women on Boards and Climate Change Disclosure: The Evidence from NFRD. In *Academy of Management Proceedings* (Vol. 2023, No. 1, p. 10753). Briarcliff Manor, NY 10510: Academy of Management.
<https://doi.org/10.5465/AMPROC.2023.10753abstract>

Asner, G. (2006). Measuring carbon emissions from tropical deforestation: an overview. *New York, États-Unis, Environmental Defense Fund*. URL:
https://www.edf.org/sites/default/files/10333_Measuring_Carbon_Emissions_from_Tropical_Deforestation--An_Overview.pdf

Ajayi, V. O. (2017). Primary sources of data and secondary sources of data. *Benue State University, 1(1), 1-6*.

Ballou, B., Chen, P. C., Grenier, J. H., & Heitger, D. L. (2018). Corporate social responsibility assurance and reporting quality: Evidence from restatements. *Journal of Accounting and Public Policy, 37(2), 167-188*.
<https://doi.org/10.1016/j.jaccpubpol.2018.02.001>

Barbier, E. B., & Burgess, J. C. (2017). The Sustainable Development Goals and the systems approach to sustainability. *Economics, 11(1), 20170028*.
<https://doi.org/10.5018/economics-ejournal.ja.2017-28>

Bekken, F. S., & Svendsen, J. (2021). *Revisors attestasjon av bærekraftsrapporter: Nytt for institusjonelle investorer i Norge* (Master's thesis, NTNU).

Beske, F., Haustein, E., & Lorson, P. C. (2020). Materiality analysis in sustainability and integrated reports. *Sustainability Accounting, Management and Policy Journal, 11(1), 162-186*. <https://doi.org/10.1108/SAMPJ-12-2018-0343>

Boiral, O. (2013). Sustainability reports as simulacra? A counter-account of A and A+ GRI reports. *Accounting, auditing & accountability journal, 26(7), 1036-1071*.
<https://doi.org/10.1108/AAAJ-04-2012-00998>

Boiral, O., & Henri, J.-F. (2017). Is Sustainability Performance Comparable? A Study of GRI Reports of Mining Organizations. *Business & Society*, 56(2), 283-317. <https://doi.org/10.1177/0007650315576134>

Bowen, Glenn A. (2009). Document Analysis as a Qualitative Research Method, *Qualitative Research Journal*, vol. 9, no. 2, pp. 27-40. <https://doi.org/10.3316/QRJ0902027>

Bruntland, G. (1987). Our common future. The World Commission on Environment 1 and Development, 45-65.

CDC. (August 16, 2021) *Dichlorodiphenyltrichloroethane (DDT) Factsheet* https://www.cdc.gov/biomonitoring/DDT_FactSheet.html

Chang, W. F., Amran, A., Iranmanesh, M., & Foroughi, B. (2019). Drivers of sustainability reporting quality: financial institution perspective. *International Journal of Ethics and Systems*, 35(4), 632-650.

Chithambo, L., Tingbani, I., Agyapong, G. A., Gyapong, E., & Damoah, I. S. (2020). Corporate voluntary greenhouse gas reporting: Stakeholder pressure and the mediating role of the chief executive officer. *Business Strategy and the Environment*, 29(4), 1666-1683. <https://doi.org/10.1016/j.jclepro.2018.12.107>

Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, organizations and society*, 40, 78-94. <https://doi.org/10.1016/j.aos.2014.12.003>

Christensen, H. E., & Johansen, E. B. (2022). *GRI-rapportering blant Norges 200 største selskaper – bare for syns skyld?* (Master's thesis, Nord universitet)

Cicchello, A. F., Marrazza, F., & Perdichizzi, S. (2023). Non-financial disclosure regulation and environmental, social, and governance (ESG) performance: The case of EU and US firms. *Corporate Social Responsibility and Environmental Management*, 30(3), 1121-1128. <https://doi.org/10.1002/csr.2408>

Delbeke, J., Runge-Metzger, A., Slingenberg, Y., & Werksman, J. (2019). The paris agreement. In *Towards a climate-neutral Europe* (pp. 24-45). Routledge.

Denkstatt. (August, 2023). *European Sustainability Reporting Standards (ESRS) in a nutshell*. <https://denkstatt.eu/esrs-standards-explained/>

Dyllick, T. & Muff, K. (2015). Clarifying the Meaning of Sustainable Business: Introducing a Typology From Business-as-Usual to True Business Sustainability. *Organization and Environment*, 29(2), 156-174. <https://doi.org/10.1177/1086026615575176>

De Grosbois, D. (2016). Corporate social responsibility reporting in the cruise tourism industry: a performance evaluation using a new institutional theory based model. *Journal of Sustainable Tourism*, 24(2), 245-269. <https://doi.org/10.1080/09669582.2015.1076827>

Diouf, D., & Boiral, O. (2017). The quality of sustainability reports and impression management: A stakeholder perspective. *Accounting, Auditing & Accountability Journal*, 30(3), 643-667. <https://doi.org/10.1108/AAAJ-04-2015-2044>

Elkem. (n, d) *Material topics for Elkem*.

<https://www.elkem.com/sustainability/esg-reporting/material-topics-for-elkem/>

Elkington, J., & Rowlands, I. H. (1999). Cannibals with forks: The triple bottom line of 21st century business. *Alternatives Journal*, 25(4), 42.

European Commission. (2021). *Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting, COM (2021) 189 final*. Retrieved from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189>.

Erlandsson, J., Bergmark, P., & Höjer, M. (2023). Establishing the planetary boundaries framework in the sustainability reporting of ICT companies—A proposal for proxy indicators. *Journal of Environmental Management*, 329, 117032.

<https://doi.org/10.1016/j.jenvman.2022.117032>

Endenich C., Hahn R., Reimsbach D., Wickert C. (2023). Wait-and-see-ism as partial adoption of management practices: The rise and stall of integrated reporting. *Strategic Organization*. Advance online publication. <https://doi.org/10.1177/14761270221078605>

Flaa Tellefsen, F. (2023). *Nye standarder for bærekraftsrapportering i Europa: en sammenligning av ESRS og GRI* (Master's thesis, University of Agder).

<https://uia.brage.unit.no/uia-xmlui/handle/11250/3082383>

Fifka, M. S. (2013). Corporate Responsibility Reporting and its Determinants in Comparative Perspective - a Review of the Empirical Literature and a Meta-analysis. *Business Strategy and the Environment*, 22(1), 1–35. <https://doi.org/10.1002/bse.729>

European Financial Reporting Advisory Group. (2023). *ESRS EUROPEAN SUSTAINABILITY REPORTING STANDARDS*.

Frans, A (2021) *The Effect of Financial Reporting Quality on the Quality of Sustainability Reporting*. (Master's thesis, Faculty of Economics and Business, University of Amsterdam)

García-Sánchez, I. M., Rodríguez-Ariza, L., Aibar-Guzmán, B., & Aibar-Guzmán, C. (2020). Do institutional investors drive corporate transparency regarding business contribution to

the sustainable development goals?. *Business Strategy and the Environment*, 29(5), 2019-2036.

<https://doi.org/10.1002/bse.2485>

Gerasimova, K. (2017). *An Analysis of The Brundtland Commission's Our Common Future*. CRC Press.

GRI. (W.Y) The GRI Standards A GUIDE FOR POLICY MAKERS

<https://www.globalreporting.org/media/nmmnwfsm/gri-policymakers-guide.pdf>

GRI. (31. July. 2023). *European Commission signals ESRS alignment with GRI*.

<https://www.globalreporting.org/news/news-center/european-commission-signals-esrs-alignment-with-gri/>

GRI. (05. July. 2023) *EFRAG-GRI JOINT STATEMENT OF INTEROPERABILITY*.

<https://www.globalreporting.org/news/news-center/efrag-gri-joint-statement-of-interoperability/>

GRI. (20, June. 2022) *GRI's technical position on the draft European Sustainability Reporting Standards*

<https://www.globalreporting.org/media/gsipjvy5/gri-s-submission-to-efrag-s-public-consultation-on-the-first-set-of-draft-esrs.pdf>

GRI. (2021) *GRI 1: Foundation 2021*. GRI

GRI. (2021) *GRI 2: General Disclosure 2021*. GRI

GRI. (2021) *GRI 3: Material Topics 2021*. GRI

GRI. (2018) *GRI Standards*. GRI

GRI. (2018) *GRI STANDARDS GLOSSARY 2018*. GRI

GRI. (2016) *GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016*. GRI

Global Reporting Initiative (GRI), United Nations Global Compact(UN Global Compact), & World Business Council for SustainableDevelopment (WBCSD). (2017). *SDG Compass. Linking the SDGs and GRI New challenges for corporate sustainability reporting: United Nations' 2030 Agenda for sustainable development and the sustainable development goals*.

Global Reporting Initiative (GRI), & United Nations Global Compact(UN Global Compact). (2018). *Business reporting on the SDGs. Inte-grating the SDGs into corporate reporting: A practical guide. New challenges for corporate sustainability reporting: United Nations' 2030 Agenda for sustainable development and the sustainable development goals*.

GYÓRI, Z., & SZIGETI, C. (2023, May). NON-FINANCIAL REPORTING PRACTICES IN HUNGARY–OPPORTUNITIES AND CHALLENGES IN PREPARATION FOR CSR. In *7th FEB International Scientific Conference* (p. 9). https://www.researchgate.net/profile/Adam-Sulich/publication/370873011_Energy_Sales_Forecasting_in_a_Sustainable_Development

[Context Bibliometric Review/links/64674d61c9802f2f72e8dcc0/Energy-Sales-Forecasting-in-a-Sustainable-Development-Context-Bibliometric-Review.pdf#page=25](https://doi.org/10.1016/j.jclepro.2013.07.005)

Hahn, R., & Kühnen, M. (2013). Determinants of sustainability reporting: A review of results, trends, theory, and opportunities in an expanding field of research. *Journal of cleaner production*, 59, 5-21. <https://doi.org/10.1016/j.jclepro.2013.07.005>

Hahn, R., Reimsbach, D., & Wickert, C. (2023). Nonfinancial Reporting and Real Sustainable Change: Relationship Status—It's Complicated. *Organization & Environment*, 36(1), 3-16. <https://doi.org/10.1177/10860266231151653>

Hahnkamper-Vandenbulcke, N. (2021) *Non-financial Reporting Directive*. [https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI\(2021\)654213](https://www.europarl.europa.eu/thinktank/en/document/EPRS_BRI(2021)654213)

Haller, A., Link, M., & Groß, T. (2017). The term 'non-financial information'—a semantic analysis of a key feature of current and future corporate reporting. *Accounting in Europe*, 14(3), 407-429
<https://doi.org/10.1080/17449480.2017.1374548>

Handl, G. (2012). Declaration of the United Nations conference on the human environment (Stockholm Declaration), 1972 and the Rio Declaration on Environment and Development, 1992. *United Nations Audiovisual Library of International Law*, 11(6).

Hauptmann, J. (2020) *ESG – Reporting Part I Basics* (Picture)
<https://www.anevis-solutions.com/2020/esg-reporting-part-i-basics/>

Hodge, K., Subramaniam, N., & Stewart, J. (2009). Assurance of sustainability reports: Impact on report users' confidence and perceptions of information credibility. *Australian accounting review*, 19(3), 178-194.
<https://doi.org/10.1111/j.1835-2561.2009.00056>

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational researcher*, 33(7), 14-26.
<https://doi.org/10.3102/0013189X033007014>

Jones, P., Comfort, D., & Hillier, D. (2016). Managing materiality: a preliminary examination of the adoption of the new GRI G4 guidelines on materiality within the business community. *Journal of Public Affairs*, 16(3), 222-230.
<https://doi.org/10.1002/pa.1586>

Jørgensen, S., Mjøs, A., & Pedersen, L. J. T. (2022). Sustainability reporting and approaches to materiality: Tensions and potential resolutions. *Sustainability Accounting, Management and Policy Journal*, 13(2), 341-361. <https://doi.org/10.1108/SAMPJ-01-2021-0009>

KPMG. (2018). *How to Report on the SDGs*. URL: <https://home.kpmg.com>

Kuh, T., Shepley, A., Bala, G., & Flowers, M. (2020). Dynamic materiality: Measuring what matters. Available at SSRN 3521035.

<http://dx.doi.org/10.2139/ssrn.3521035>

Leedy, Paul D., Ormrod, Jeanne Ellis and Johnson, Laura Ruth. Practical Research: Planning and Design, 12th edition. Harlow: Pearson Education Limited, 2021

Li, T. T., Wang, K., Sueyoshi, T., & Wang, D. D. (2021). ESG: Research progress and future prospects. *Sustainability*, 13(21), 11663. <https://doi.org/10.3390/su132111663>

Luo, X. R., Wang, D., & Zhang, J. (2017). Whose call to answer: Institutional complexity and firms' CSR reporting. *Academy of management journal*, 60(1), 321-344.

<https://doi.org/10.5465/amj.2014.0847>

Lydersen, S. (2018). Cohens kappa-et mål på samsvar mellom observatører. *Tidsskrift for Den norske legeförening*. doi: 10.4045/tidsskr.17.0962

Mathiesen, I. H., & Volckmar-Eeg, M. G. (2022). En abduktiv tilnærming til institusjonell etnografi-et bidrag til sosiologisk kunnskapsutvikling. *Norsk sosiologisk tidsskrift*, (1), 9-23.

<https://doi.org/10.18261/nost.6.1.2>

Moore, J. E., Mascarenhas, A., Bain, J., & Straus, S. E. (2017). Developing a comprehensive definition of sustainability. *Implementation Science*, 12(1), 1-8.

<https://doi.org/10.1186/s13012-017-0637-1>

Noonan, D. (n. D) *The Evolution of NFRD into CSRD*.

<https://greenomy.io/blog/evolution-nfrd-csrd>

NRDC. (August 13, 2015) *Story Silent Spring*

<https://www.nrdc.org/stories/story-silent-spring>

O'Neill, D. W., Fanning, A. L., Lamb, W. F., & Steinberger, J. K. (2018). A good life for all within planetary boundaries. *Nature sustainability*, 1(2), 88-95.

Orazalin, N., & Mahmood, M. (2020). Determinants of GRI-based sustainability reporting: evidence from an emerging economy. *Journal of Accounting in Emerging Economies*, 10(1), 140-164.

<https://doi.org/10.1108/JAEE-12-2018-0137>

Pflugrath, G., Roebuck, P., & Simnett, R. (2011). Impact of assurance and assurer's professional affiliation on financial analysts' assessment of credibility of corporate social responsibility information. *Auditing: A Journal of Practice & Theory*, 30(3), 239-254.

<https://doi.org/10.2308/ajpt-10047>

Plumlee, M., Brown, D., Hayes, R. M., & Marshall, R. S. (2015). Voluntary environmental disclosure quality and firm value: Further evidence. *Journal of accounting and public policy*, 34(4), 336-361. <https://doi.org/10.1016/j.jaccpubpol.2015.04.004>

Pizzi, S., Del Baldo, M., Caputo, F., & Venturelli, A. (2022). Voluntary disclosure of Sustainable Development Goals in mandatory non-financial reports: The moderating role of cultural dimension. *Journal of International Financial Management & Accounting*, 33(1), 83-106.

<https://doi.org/10.1111/jifm.12139>

Reeves, C. A., & Bednar, D. A. (1994). Defining quality: alternatives and implications. *Academy of management Review*, 19(3), 419-445.

<https://doi.org/10.5465/amr.1994.9412271805>

Regnskapsloven (2013) *Redegjørelse om samfunnsansvar mv* (LOV-1998-07-17-56).

https://lovdata.no/dokument/NL/lov/1998-07-17-56/KAPITTEL_3#%C2%A73-5

Rezaee, Z., & Tuo, L. (2019). Are the quantity and quality of sustainability disclosures associated with the innate and discretionary earnings quality?. *Journal of Business Ethics*, 155, 763-786. <https://doi.org/10.1007/s10551-017-3546-y>

Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin, F. S., Lambin, E., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H. J., Nykvist, B., de Wit, C. A., Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P. K., Costanza, R., Svedin, U., ... Foley, J. (2009). Planetary Boundaries: Exploring the Safe Operating Space for Humanity. *Ecology and Society*, 14(2). <https://doi.org/10.1038/461472a>

Rogmans, T., & El-Jisr, K. (2022). Designing Your Company's Sustainability Report. *Business and Society*.

Rosati, F., & Faria, L. G. (2019). Addressing the SDGs in sustainability reports: The relationship with institutional factors. *Journal of cleaner production*, 215, 1312-1326.

<https://doi.org/10.1016/j.jclepro.2018.12.107>

Schoenmaker, D., & Schramade, W. (2019). Investing for long-term value creation. *Journal of Sustainable Finance & Investment*, 9(4), 356-377.

Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., ... & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, 347(6223), 1259855. doi: <https://doi.org/10.1126/science.1259855>

Saunders M., Lewis P., & Thornhill A., 2007, *Research methods for business students*, fourth edn, Pearson Education, England.

Täger, M (21.July, 2021). *Double materiality': what is it and why does it matter?*<https://www.lse.ac.uk/granthaminstitute/news/double-materiality-what-is-it-and-why-does-it-matter/>

Tsalis, T. A., Malamateniou, K. E., Koulouriotis, D., & Nikolaou, I. E. (2020). New challenges for corporate sustainability reporting: United Nations' 2030 Agenda for sustainable development and the sustainable development goals. *Corporate Social Responsibility and Environmental Management*, 27(4), 1617-1629. <https://doi.org/10.1002/csr.1910>

Turzo, T., Marzi, G., Favino, C., & Terzani, S. (2022). Non-financial reporting research and practice: Lessons from the last decade. *Journal of Cleaner Production*, 345, 131154. <https://doi.org/10.1016/j.jclepro.2022.131154>

UN. (W. Y) *United Nations Conference on the Human Environment, 5-16 June 1972, Stockholm* <https://www.un.org/en/conferences/environment/stockholm1972>

UN: (W. Y) *Transforming our world: the 2030 Agenda for Sustainable Development* <https://sdgs.un.org/2030agenda>

UN. (December, 2022) *United Nations Conference on Environment and Development (UNCED), Earth Summit*

<https://sustainabledevelopment.un.org/milestones/unced>

UNFCCC. (W. Y) *The Paris Agreement*

<https://unfccc.int/process-and-meetings/the-paris-agreement>

Vedula S., Dobliger C., Pacheco D., York J. G., Bacq S., Russo M. V., Dean T. J. (2022). Entrepreneurship for the public good: A review, critique, and path forward for social and environmental entrepreneurship research. *Academy of Management Annals*, 16(1), 391–425. <https://doi.org/10.5465/annals.2019.0143>

Van der Waal, J. W., & Thijssens, T. (2020). Corporate involvement in sustainable development goals: Exploring the territory. *Journal of Cleaner Production*, 252, 119625. <https://doi.org/10.1016/j.jclepro.2019.119625>

Van Nederpelt, P. W. (2011). *Attributes of Quality Reports*. Statistics Netherlands. URL: http://www.oqrm.org/English/2011_Attributes_of_quality_reports.pdf

Whitehead, J. (2017), "Prioritizing sustainability indicators: using materiality analysis to guide sustainability assessment and strategy", *Business Strategy and the Environment*, Vol. 26 No. 3, pp. 399-412. <https://doi.org/10.1002/bse.1928>

Wickert C. (2021). Corporate social responsibility research in the journal of management studies: A shift from a business-centric to a society-centric focus. *Journal of Management Studies*, 58(8), E1–E17. <https://doi.org/10.1111/joms.12775>

Annual reports, sustainability reports and GRI Indexes from studied companies

Norsk Hydro. (2018) *GRI Index 2018*
<https://www.hydro.com/Document/Doc/GRI-index.pdf?docId=8522>

Norsk Hydro. (2018) *Annual report 2018*
<https://www.hydro.com/Document/Doc/2018%20Annual%20report.pdf?docId=8525>

Norsk Hydro. (2022) *GRI Index 2022*
<https://www.hydro.com/Document/Doc/GRI%20index%202022.pdf?docId=589831>

Norsk Hydro. (2022) *Annual report 2022*
<https://www.hydro.com/Document/Doc/annual-report-2022eng.pdf?docId=590420>

Bærekraftsrapport rapport. (2018) *GRI Index Moelven*:
<https://www.moelven.com/globalassets/konsern/finansielle-rapporter/barekraftsrapporter/2018-barekraftsrapport.pdf>

Moelven. (2022) *GRI index 2022*.
https://www.moelven.com/globalassets/konsern/finansielle-rapporter/barekraftsrapporter/moelven-gri-indeks--2022.pdf?utm_source=pdf&utm_medium=2023report&utm_keyword=baerekraft&fbclid=IwAR3ov0mbpZufOYh2Ku8DSnai6_DbxYvY6UEiVRxWNEVqeijc2Gqo3qWWIBc

Moelven. (2022) *Bærekraftsrapport 2022*
<https://www.moelven.com/globalassets/konsern/finansielle-rapporter/barekraftsrapporter/2022-barekraftsrapport.pdf>

Telenor ASA. (2018) *GRI index 2018*
<https://www.telenor.com/binaries/sustainability/reporting-our-performance/reports-and-studies-archive/Telenor-GRI-Sustainability-Standards-Report-2018.pdf>

Telenor.ASA. (2018) annual report 2018:
<https://www.telenor.com/wp-content/uploads/2019/03/Annual-Report-2018-Q-f620116b2df031374baf3747e3e5644a-1.pdf>

Telenor ASA. (2018) *Sustainability report 2018*
<https://www.telenor.com/wp-content/uploads/2019/04/Telenor-Sustainability-Report-2018-Q-397c7a029c6faae8a8c13018cc1229bb.pdf>

Telenor ASA. (2022) GRI index 2022:
<https://www.telenor.com/binaries/sustainability/reporting-our-performance/reports-and-studies-archive/Telenor%20GRI%20Report%202022.pdf>

Telenor. (2022) *Annual report 2022*
<https://www.telenor.com/binaries/investors/reports-and-information/annual/annual-report-2022/Annual%20Report%202022.pdf>

DNB ASA. (2018) *GRI Index 2018*
https://www.dnb.no/portalfront/nedlast/en/about-us/corporate-responsibility/2018/GRI_indeks_2018.pdf

DNB ASA. (2018) *Annual report 2018*
https://www.dnb.no/portalfront/nedlast/en/about-us/Results/2018/Annual_report_DNB_2018.pdf

DNB ASA. (2022) *GRI Index 2022*
https://www.dnb.no/portalfront/nedlast/no/om-oss/aarsrapport/en_2022/GRI_Index_2022.pdf

DNB ASA. (2022) *Annual report 2022*
https://www.dnb.no/portalfront/nedlast/no/om-oss/aarsrapport/en_2022/Annual_Report_DNB_Group_2022.pdf

Vår Energi. (2019) *Sustainability report*
<https://varenergi.no/wp-content/uploads/2020/06/V%C3%A5r-Energi-Sustainability-Report-2019.pdf>

Vår Energi. (2022) *Annual report 2022*
<https://varenergi.no/wp-content/uploads/2023/03/Var-Energi-Annual-report-2022.pdf>

Vår Energi. (2022) *Sustainability report 2022*
<https://varenergi.no/wp-content/uploads/2023/03/Var-Energi-Sustainability-report-2022.pdf>

Yara. (2018) *Sustainability GRI report 2018*
<https://www.yara.com/siteassets/sustainability/grisustainability-reports/yara-sustainability-gri-report-2018.pdf/>

Yara. (2018) *Annual report 2018*
<https://www.yara.com/siteassets/investors/057-reports-and-presentations/annual-reports/2018/yara-annual-report-2018-web.pdf/>

Yara. (2022) *Sustainability report and GRI report 2022*
<https://www.yara.com/siteassets/investors/057-reports-and-presentations/annual-reports/2022/yara-sustainability-report-2022.pdf/>

Yara. (2022). *Integrated report 2022*
<https://www.yara.com/siteassets/investors/057-reports-and-presentations/annual-reports/2022/yara-integrated-report-2022.pdf/>

Orkla. (2018) *Annual report 2018*
https://aarsrapport2018.orkla.no/assets/orkla/pdfs/2018/no/Orkla%20Annual%20Report%202018%20NO_WEB.pdf

Orkla. (2022). *GRI Index 2022*

<https://www.orkla.com/wp-content/uploads/sites/3/2023/04/GRI-Content-Index-2022.pdf>

Orkla. (2022) *Annual report 2022*

<https://www.orkla.no/wp-content/uploads/sites/2/2023/03/Orkla-Annual-Report-2022.pdf>

Elkem. (2018) *Sustainability report 2018*

https://www.elkem.com/globalassets/corporate/02---esgsustainability/2018-reporting/elkem_sustain_2018_print.pdf

Elkem. (2018) *GRI index 2018*

<https://www.elkem.com/globalassets/corporate/02---esgsustainability/2018-reporting/2018-gri-index.pdf>

Elkem. (2018) *Annual report 2018*

<https://www.elkem.com/globalassets/corporate/documents/elkem-annual-report-2018-web2.pdf>

Elkem. (2022). *ESG Sustainability report 2022*

<https://www.elkem.com/globalassets/corporate/02---esgsustainability/2022-reporting/elkem-esg-2022.pdf>

Elkem. (2022). *GRI Index 2022*

<https://www.elkem.com/globalassets/corporate/02---esgsustainability/2022-reporting/gri-index-2022-esg-report-elkem-.pdf>

Elkem. (2022). *Annual report 2022*

<https://www.elkem.com/globalassets/corporate/documents/annual-report/elkem-annual-report-2022.pdf>

