
Master Thesis MSc International Business & Politics

# How can differences in CSR report quality of German and Danish listed companies be explained?

## A longitudinal study with a particular focus on the impact of legislation.

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# Executive Summary

This thesis applies content analysis to analyse and compare the quality of 150 CSR reports published by listed German and Danish companies from four sectors between 2008 and 2017. The aim is to understand what factors impact CSR report quality with a focus on the potential impact of CSR reporting legislation. Institutional, legitimacy and signalling theory form the theoretical foundation for the analysis. The report quality evaluation frame is constructed in a concept-driven way and supplemented by a data-driven frame in a second part aiming at understanding the impact of national culture. Evidence is presented that CSR report quality differs across companies of different size and different sectors within each country but also between German and Danish companies of similar size or within the same sector. Findings suggest that differences in CSR report quality between German and Danish companies may be explained by a combination of firm internal and external factors. Firm size seems to positively impact overall report quality and the extent of reporting on employee matters, while sector affiliation seems to impact the extent of reporting on certain CSR topics, such as environmental matters. National culture and ownership structure also seem to influence CSR report quality through stakeholder expectations, which may explain differences in the extent of reporting on certain topics or differences in choice of format and reporting framework. Mandatory CSR reporting legislation seems to improve the overall CSR report quality and fosters a convergence of report quality of German and Danish companies at an overall higher level than under voluntary reporting. Thus, mandatory reporting in Denmark seems to have moderated the effect of factors causing differences in report quality between German and Danish companies such as firm size. It further seemed to encourage companies from both countries to switch from reporting as a section in their annual report to publishing separate CSR reports, which tends to increase report quality. Furthermore, large and medium-sized German companies primarily seem to use separate CSR reports as perception management tools both under conditions of voluntary and mandatory reporting. Under mandatory reporting requirements, Danish large companies show less indication to do so and medium-sized Danish companies seem to be motivated by the desire to send credible signals about their CSR performance. These different motives may also contribute to the observed differences in CSR report quality.

# Summary of contents

# I. Introduction

In 2014, the European Union (EU) adopted the non-financial reporting Directive (2014/95/EU) making the disclosure of certain non-financial topics mandatory for large listed companies. They are required to report on policies, actions and outcomes regarding their environmental impact, social and employee matters, impact on human rights and corruption. The directive aims to establish a minimum legal requirement for non-financial information that should be made available to the public, enhance consistency and comparability of the information disclosed. According to its preamble, the Directive aims at raising the level of corporate transparency and reporting on social and environmental information in all sectors across the EU. The European Commission's (2013) impact assessment concluded that EU-wide mandatory rules on non-financial reporting would significantly increase the quality of non-financial information disclosure.

However, there is disagreement among scholars and practitioners whether mandatory reporting is superior to voluntary disclosure in terms of disclosure quality. Some claim that regulation positively impacts CSR reporting, while others claim that the voluntary nature of CSR reporting is essential (Romolini, Fissi and Gori, 2014). Hess (2008) points out that mandatory reporting rules legitimise the public's right to non-financial information and through increased accessibility increase stakeholder scrutiny, which in turn can motivate improvements in a company's non-financial performance. Others argue that voluntary reporting leads to less comprehensive disclosure by a limited number of firms and therefore call for regulation (Kolk and Pinkse, 2010).

Critics of mandatory reporting argue that non-financial reporting should develop bottom-up, as mandatory one-size-fit-all solutions are inappropriate given the differences among companies (ICC, 2015). A voluntary and flexible approach would keep alive public and corporate interest in the non-financial reporting agenda and foster experimentation and innovation (Hahn and Kühnen, 2013; ICC, 2015). Mandatory reporting may distort the focus on the meaningfulness of standardised indicators and instead lead to a formality-driven "tick the box" exercise providing little value for stakeholders (de Colle, Henriques and Sarasvathy, 2014, p. 185).

Empirical evidence on the effect of mandatory reporting on report quality is mixed. Some studies find that reports issued under conditions of mandatory legal requirements tend to be of higher quality than reports issued voluntarily (Hąbek and Wolniak, 2016; Sethi, Martell and Demir, 2017). Bebbington, Kirk and Larrinaga (2012) by contrast find that voluntary reporting regimes in the UK reached greater normative acceptance than legally mandated reporting requirements in Spain, which led to greater compliance with the voluntary regime resulting also in higher report quality. Evidence from France where non-financial reporting became mandatory in 2001 shows that initial compliance was low and overall report quality did not improve much

(Chauvey *et al.*, 2015). Research on Norwegian firms confirms the finding of low compliance with mandatory requirements, particularly in the absence of societal pressure from consumers, civil-society groups and investors (Vormedal and Ruud, 2009).

## Terminology

There is no universal definition of CSR and many differing viewpoints exist (Hahn and Kühnen, 2013). Many build on the definition provided by the Brundtland Commission of sustainable development to "meet the needs of the present without compromising the ability of future generations to meet their own needs" (1987, p. 16). CSR has been defined as a company's voluntary contribution to sustainable development going beyond legal requirements (Gamerschlag, Möller and Verbeeten, 2011). Dyllick and Hockerts define it as "meeting the needs of a firm's direct and indirect stakeholders (such as shareholders, employees, clients, pressure groups, communities etc), without compromising its ability to meet the needs of future stakeholders as well." (2002, p. 131). This requires companies to incorporate all aspects of the "triple-bottom line" into their business conduct, and "track and manage their economic, social and environmental value added – or destroyed" (Elkington, 2018, p. 3).

CSR reports are one of the most common forms of corporate communication on environmental and social impacts of corporate activity (Hetze, 2016). However, there is also no universally accepted definition of non-financial disclosure (Romolini, Fissi and Gori, 2014), which is also commonly referred to as CSR reporting (Chauvey *et al.*, 2015; Jian *et al.*, 2017; Odriozola and Baraibar-Diez, 2017), sustainability reporting (Martínez-Ferrero, Garcia-Sanchez and Cuadrado-Ballesteros, 2015; Hummel and Schlick, 2016; Diouf and Boiral, 2017) or ESG (environmental, social and governance) reporting (European Commission, 2013; Weber, 2014). This paper uses the term CSR reporting or disclosure.

In the impact assessment of the non-financial reporting directive, the European Commission defines CSR reporting as "a company's reporting practices of its economic, environmental and social performance" (2013, p. 88) and refers to the GRI (Global Reporting Initiative) Guidelines' definition of the term: "Sustainability reporting, as promoted by the GRI Standards, is an organization's practice of reporting publicly on its economic, environmental, and/or social impacts, and hence its contributions – positive or negative – towards the goal of sustainable development." (2016, p. 3). Citing, the GRI, the European Commission in its definition further stresses that CSR reporting is "the practice of measuring, disclosing and being accountable to internal and external stakeholders for organisational performance towards the goal of sustainable development"." (2013, p. 88).

In sum, CSR reports are communication tools to reduce the information asymmetry between the company and its stakeholders about how a company addresses sustainability challenges and the company's social and environmental performance (Romolini, Fissi and Gori, 2014). Hahn and Kühnen (2013) point out that the primarily voluntary nature of CSR reporting has led to an abundance of labels for recent reports (e.g. CSR report, non-financial report, sustainability report, corporate responsibility report, corporate citizenship report). CSR reports come in various forms (e.g. integrated reports, specialised CSR reports), but often companies also publish non-financial information as a part of their annual financial reporting (Hahn and Kühnen, 2013; Chan, Watson and Woodliff, 2014).

## II. Research question and delimitations

Against the background of different findings in the literature regarding the impact of mandatory reporting on CSR report quality, the introduction of EU-wide mandatory CSR reporting regulation offers a good reason to study what factors seem to affect CSR report quality and what impact mandatory reporting requirements seem to have on overall report quality. Therefore, this paper analyses and compares the CSR report quality of German and Danish listed companies. Germany and Denmark have both enacted national legislations to transpose the EU non-financial reporting Directive. However, their legal tradition on CSR reporting regulation differs. While Denmark introduced mandatory reporting in 2009, Germany had no specific legislation on CSR reporting before 2017.[1] This makes them to interesting cases to compare.

In his literature review on factors that impact CSR reporting, Fifka (2013) points out that most work is conducted on causal relationships of factors that influence the decision to publish CSR information and the extent of reporting leaving room for research on determinants of report quality. Additionally, the disagreement regarding the effect of mandatory reporting on CSR report quality outlined above indicates that further research on the impact of legislation on report quality is needed.

Many of the studies reviewed for this paper analyse and compare report quality at one point in time to compare a large number of reports for the same year (Hummel and Schlick, 2016; Lock and Seele, 2016; Sethi, Martell and Demir, 2017). This provides a snapshot of quality differences at that point in time and offers insight into causal relationships of the factors that impact CSR report quality. Other studies compare reports of the same country at one or two points in time after a change in legislation (Pedersen *et al.*, 2013; Chauvey *et al.*, 2015). There are few longitudinal studies that capture the development of CSR report quality over time (Gillet-Monjarret, 2018; Russo-Spena, Tregua and De Chiara, 2018). Thus, this paper contributes with empirical evidence on the development and differences in quality of listed German and Danish companies

[1] See Appendix 1 for description of the German and Danish CSR reporting regulation.

over a period of ten years. To my best knowledge, it is the only paper analysing such evidence. Furthermore, it contributes a unique evaluation framework based in large parts on the conceptual work on CSR report quality by Hess (2008) complemented by a review of relevant literature.

### Delimitations

This research only includes listed companies that fall under the scope of the respective national CSR reporting regulation. The focus is on evaluating the report quality of the sample companies and not on presenting the full content of their CSR reports.

The literature has pointed out a variety of factors that impact CSR reporting (see section V.2.). Due to time and resource limitations this paper primarily focuses on company size, sector affiliation and reporting format. National culture and ownership structure are discussed briefly. Due to the small sample size and limited number of observations per year, the aim of this paper is to point out indications of how CSR reporting quality seems to differ between German and Danish listed companies and what factors may influence these differences, yet, without making definite causal inferences or claims to generalisability beyond the sample companies without further testing.

This paper is structured as follows. Following this introduction, the research design is described first from a philosophy of science perspective then from a methodological point. Consequently, the theoretical foundation is presented consisting of institutional, legitimacy and signalling theory before reviewing the literature on determinants of CSR reporting. This theoretical frame is operationalised to construct a quality evaluation frame in a concept-driven way, which works as the coding frame in the content analysis of the CSR reports under study. The next section analyses and discusses the empirical findings, followed by a conclusion which also points out limitations and areas for further research.

## III. Research philosophy

This paper is guided by the ontological view of scientific realism (Moses and Knutsen, 2012). It builds on the naturalist foundation that a real world consisting of causal mechanisms exists outside of human experience, which are best grasped through the application of scientific method (Shapiro, 2005). Yet, it also shares constructivists' claim that there are many layers of truth as the world is understood to be complex (Moses and Knutsen, 2012). Therefore, scientific realism avoids making claims to "universal laws" and questions the neutrality of the researcher (Moses and Knutsen, 2012).

Moses and Knutsen argue that "good science should be driven by questions, not by methods" (2012, p. 13). Thus, following a research philosophy of pragmatism the research question is considered to be crucial for

determining the research design (Saunders, Thornhill and Lewis, 2006). Scientific realism is reconcilable with a broad range of different methods but "implies that particular choices should depend in the nature of the object of study and what one wants to learn about it." (Sayer, 2000, p. 19).

The question to be answered in this paper concerns how differences in CSR reporting of German and Danish listed companies can be explained. As CSR reports are one of the most important means of corporate communication about CSR, content analysis is chosen as a method, because it allows to codify, evaluate and compare the information provided in CSR reports.

A rich body of literature exists on determinants of CSR reporting, which means that the topic is well-suited for a deductive research design (Saunders, Thornhill and Lewis, 2006). Previous research has pointed out several factors that were found to impact CSR reporting. However, empirical evidence on their effect on CSR report quality is inconclusive. Thus, this paper aims to find indications for which factors seem to be influencing CSR reporting of German and Danish firms and may explain differences.

The research question requires to create a differentiated evaluation frame that allows to analyse differences in reporting and compare overall report quality. This evaluation framework is constructed in a concept-driven way by drawing on previous literature on CSR report quality evaluation. The results of this part of the content analysis are presented in a quantitative way using descriptive statistics. Yet, following the pragmatic foundation of this research, in a second part of the content analysis is built in a data-driven way triggered by an observation made during the main coding phase applying the quality evaluation frame. The results of this part of the content analysis are presented in a more qualitative way describing the differences in some part of the content of German and Danish CSR reports.

The method, content analysis, has been described as "ontologically and epistemologically "naïve"", because "the material is taken "for granted"" (Schreier, 2013, p. 181). In line with a critical realist epistemology it is assumed that researchers can only understand the "bigger picture" in the social world if they try to understand the social structures that have given rise to the phenomenon that is being studied (Saunders, Thornhill and Lewis, 2006, p. 105). Companies do not publish CSR reports in a social vacuum, thus the social structures must be taken into consideration to better understand and analyse differences in CSR reporting. Thus, this paper draws on a broad variety of literature and does not only considers the content of the CSR reports and firm internal determinants of CSR but tries to understand also the impact of firm external and contextual determinants of CSR reporting, such as national culture and stakeholder expectations.

Due to the time-consuming nature of the method applied (content analysis) and the longitudinal comparative approach, the number of observations per sector in a given country and year is limited (between 3 to 6).

Thus, it would not be reasonable to draw "law-like" generalisations from the findings. Therefore, instead for formulating hypotheses for consequent testing, this paper summarises the factors that previous literature has pointed out to affect CSR report quality and aims to find indications in the data for potential effects or influences of these factors. Where possible, findings from the content analysis are triangulated with relevant literature.

# IV. Methodology

To answer the research question, content analysis is used evaluate CSR report quality.

## 1. Content Analysis

Content analysis allows to quantify the content of a textual data (Hooks and van Staden, 2011). Krippendorff defines it as "a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use." (2004, p. 18). This involves quantifying textual content through the use of pre-determined categories (Prior, 2014). There are two variations: qualitative and quantitative content analysis. As Schreier summarises, both variations involve the "use of a coding frame, generating category definitions, segmenting the material into coding units, and distinguishing between a pilot phase and a main phase of analysis." (2013, p. 173). Quantitative content analysis is often used to test hypotheses; therefore, the coding frame is mostly constructed in a concept-driven way, followed by a statistical analysis of the data. Qualitative content analysis is mostly used to provide a detailed description of the material under study and involves building the coding frame in a data-driven way (Schreier, 2013).

Content analysis can be extent or quality-based. Extent-based analysis focuses on the amount of information provided on a given topic. In the context of CSR reporting, it aims at quantifying how often specific issues are mentioned in a report by coding the frequency of certain words or phrases or capturing the length of CSR reports by counting words, sentences or pages (Al-Tuwaijri, Christensen and Hughes, 2004; Herda, Taylor and Winterbotham, 2012; Chan, Watson and Woodliff, 2014). Quality-based analysis instead evaluates the content rather than counting frequencies and recognises that "certain types of information are more useful to readers than others." (Hooks and van Staden, 2011, p. 200). In the context of CSR reporting, this entails the creation of a quality index against which report content is evaluated (Sethi, Martell and Demir, 2017).

The approach chosen here is quantitative and quality-based. To analyse the CSR report quality of German and Danish companies, it is necessary to build an evaluation framework in a concept-driven approach rather than building the frame in a data-driven way capturing the full content of the reports. Report quality is inherently normative. Therefore, the evaluation framework is constructed in a concept-driven way based on a review of relevant literature (see section V.3.).

Besides coding the reports' content, other information, such as reporting format (whether the coded information is published in a section of the annual report, as a separate CSR report or in an integrated report), report length and reporting framework (e.g. if a report applies the GRI guidelines) is noted as well. Further, information relevant for grouping the companies into size segments (e.g. annual revenue, number of employees) is collected from the annual reports and the UN Global Compact homepage is searched to note whether a company is an active participant and since when (UNGC, 2018).

This paper aims to understand how CSR report quality has changed over time and what impact changes of CSR reporting legislation may have had. Denmark first introduced legislation on mandatory CSR reporting for listed companies affecting the financial year (FY) 2009. Hence, the first CSR reports that were issued under conditions of mandatory reporting were reports on the FY 2009.[2] To include at least one year where a reasonable amount of reports were retrievable while both Germany and Denmark had no legislation on mandatory CSR reporting, the FY 2008 is included in the period under study (2008 to date). Due to the time-consuming nature of content analysis, it would be unfeasible to code 10 reports per company. Furthermore, as companies do not always comply fully and in due time with legislative changes affecting CSR reporting it may not be value-adding to code all reports for the whole period under study (Vormedal and Ruud, 2009).

The Danish laws on CSR reporting were significantly changed affecting the FYs 2009, 2013 and 2016. Pedersen et al (2013) analysed Danish companies' reaction to the change in CSR reporting regulation and found that companies tended to react with a certain time lag. This indicates that it may not be necessary to code the CSR reports of a given company for all years from 2008-2017. Yet, it cannot be assumed that coding only the reports of 2009, 2013 and 2016 would fully capture and reflect the effect of the change in legislation as a significant share of sample companies may not react immediately.

Thus, in a first pilot coding phase, all 10 reports of a representative sub-sample consisting of eight Danish companies (two from each industry) were coded. This first pilot served a double purpose: 1) testing, adapting and refining the coding frame and 2) identifying the years where companies changed their CSR reporting to determine which years should be coded for the full sample (see Attachments for coding frame and coding sheet).

[2] Throughout the paper all references made to years in relation to CSR reports concern the FY covered by the report not the year when it was published.

## 2. Pilot coding phase

During the first pilot, the coding frame was adapted, some sub-categories were added, others were merged. Overall, the definitions were clarified, and decision rules created. Table 1 shows the results from the first pilot. The years, where the quality scores changed more than 3 points in any sub-score are marked yellow.

**Table 1: Findings from first pilot coding phase**

| | Novo Nordisk | | | | | | | | | | Lundbeck | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** |
| **Disclosure** | 32 | 32 | 31 | 32 | 31 | 32 | 31 | 31 | 32 | 32 | 25 | 24 | 20 | 20 | 20 | 19 | 26 | 15 | 12 | |
| **Dialogue** | 3 | 3 | 3 | 3 | 3 | 6 | 5 | 5 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 6 | 5 | |
| **Development** | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 4 | 3 | |
| **Credibility** | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 10 | 10 | 7 | 6 | 7 | 8 | 9 | 8 | 6 | |
| **TOTAL** | 56 | 56 | 55 | 56 | 55 | 59 | 57 | 57 | 57 | 56 | 41 | 41 | 33 | 32 | 35 | 35 | 44 | 33 | 26 | |

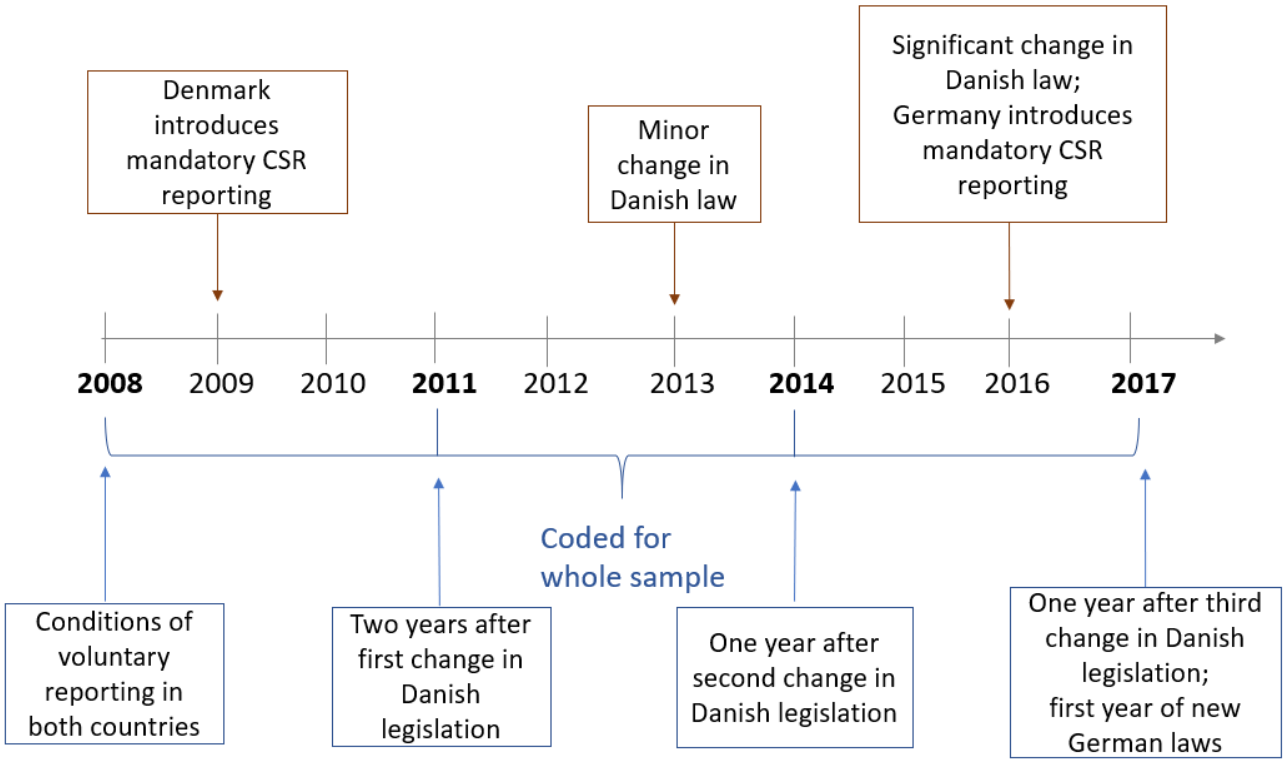
| | DFDS | | | | | | | | | | DSV | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** |
| **Disclosure** | 26 | 26 | 24 | 23 | 23 | 22 | 21 | 9 | 10 | 8 | 31 | 33 | 28 | 30 | 29 | 29 | 23 | 19 | 8 | 7 |
| **Dialogue** | 3 | 8 | 8 | 8 | 8 | 8 | 7 | 0 | 0 | 0 | 4 | 4 | 4 | 2 | 2 | 3 | 2 | 2 | 0 | 0 |
| **Development** | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 1 | 2 | 2 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 2 | 1 | 1 |
| **Credibility** | 9 | 10 | 10 | 10 | 9 | 7 | 8 | 5 | 4 | 4 | 10 | 10 | 10 | 9 | 10 | 10 | 7 | 6 | 4 | 3 |
| **TOTAL** | 43 | 49 | 47 | 46 | 45 | 43 | 42 | 15 | 16 | 14 | 53 | 55 | 48 | 47 | 47 | 48 | 38 | 29 | 13 | 11 |

| | Jyske Bank | | | | | | | | | | Laan & Spar | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** |
| **Disclosure** | 29 | 29 | 21 | 17 | 9 | 9 | 11 | 8 | | | 15 | 15 | 15 | 15 | 12 | 2 | 2 | 2 | 1 | 0 |
| **Dialogue** | 7 | 11 | 4 | 2 | 1 | 1 | 0 | 0 | | | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| **Development** | 4 | 4 | 3 | 2 | 1 | 1 | 1 | 0 | | | 3 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| **Credibility** | 6 | 6 | 3 | 1 | 1 | 2 | 2 | 1 | | | 5 | 4 | 4 | 5 | 4 | 2 | 2 | 2 | 2 | 2 |
| **TOTAL** | 46 | 50 | 31 | 22 | 12 | 13 | 14 | 9 | | | 25 | 24 | 24 | 24 | 19 | 5 | 5 | 4 | 3 | 2 |

| | Bang & Olufsen | | | | | | | | | | Pandora | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** | **17** | **16** | **15** | **14** | **13** | **12** | **11** | **10** | **9** | **8** |
| **Disclosure** | 17 | 18 | 16 | 17 | 17 | 17 | 15 | 14 | 13 | 5 | 35 | 31 | 31 | 32 | 29 | 22 | 21 | 17 | 5 | |
| **Dialogue** | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 2 | |
| **Development** | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 4 | 4 | 5 | 5 | 4 | 5 | 6 | 5 | 0 | |
| **Credibility** | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 5 | 2 | 8 | 8 | 8 | 8 | 6 | 7 | 5 | 6 | 2 | |
| **TOTAL** | 28 | 27 | 25 | 25 | 25 | 24 | 23 | 20 | 19 | 7 | 50 | 46 | 47 | 49 | 42 | 36 | 34 | 31 | 9 | |

=no CSR info published
=change of more than 3 points in any of the four categories

Companies respond with a certain time lag to changes in legislation, because the new legislation became effective in 2009, yet, most companies' scores significantly increased in the years 2010 and 2011. Based on the above and taking into consideration that the Danish CSR reporting laws were changed to affect the years 2009, 2013 and 2016, it was decided to code the full sample for the years 2008, 2011, 2014 and 2017.




After ten days, the year 2014 was randomly chosen and all eight reports from this year were recoded to ensure consistency (Schreier, 2013). Table 2 summarises the results of the recoding and shows that overall consistency was at about 80%.

**Table 2: Results of Recoding of 2014 reports**

| Company | Total subcategories coded* | Number of differences | % consistency | Change in score (new-old) |
|---|---|---|---|---|
| Novo Nordisk | 20 | 5 | 75% | -1 |
| Lundbeck | 19 | 3 | 84% | 1 |
| Laan&Spar | 17 | 3 | 82% | 1 |
| Jyske Bank | 13 | 4 | 69% | 0 |
| DFDS | 20 | 2 | 90% | 0 |
| DSV | 19 | 5 | 74% | 1 |
| Pandora | 20 | 2 | 90% | -2 |
| Bang&Olufsen | 17 | 4 | 76% | 1 |
| **Total** | **145** | **28** | **81%** | |

*out of a total of 30 subcategories

Before coding the whole sample consisting of 150 reports[3] (including the 32 already coded relevant Danish reports from the first pilot), the refined coding frame was again tested by coding 8 randomly selected German

[3] 19 German and 19 Danish companies with 4 reports each. 2 2008 reports from consumer companies (1 German, 1 Danish) could not be obtained.

reports (two from each sector). This showed that the coding frame was suitable for capturing the information provided in the German reports, and therefore, no further changes were made.

## 3. Second coding frame

During the main coding phase, it was noticed that German companies seemed to use the term "corporate citizenship" (and variations thereof such as "corporate citizen", "responsible citizenship") much more frequently than their Danish counterparts. Therefore, a separate coding sheet was constructed in a data-driven manner, where the coder used the search function to find all references to corporate citizenship by searching all reports for the following key words: "citizen", "bürger", "borger" to capture all incidents where a report either described the company as an active/good/corporate/responsible citizen or referred to the company's activities as citizenship. It was counted how often a company used the term and it was also noted in what context the term was used. This led to the collection of 11 different categories (see Appendix 2).

## 4. Remarks on sample selection

The literature has pointed to ownership structure, company size and sector affiliation as factors that impact CSR reporting. To reduce bias and improve comparability, only listed companies (and a few companies that were listed by 2010[4]) were chosen for the sample (see Appendix 3 for full list). Furthermore, companies of different size and four different sectors were included.

The literature has pointed out that affiliation with an environmentally-sensitive sector and whether a company operates in a B2B or B2C business affects a company's CSR reporting. The following four sectors were chosen with regard to different impact on the environment and the overall nature of the business:

- Pharma/chemistry: considered environmentally sensitive, production of physical goods, primarily B2C
- Transport/Logistics: considered environmentally sensitive, primarily services, mix of B2B and B2C
- Banking: considered not environmentally sensitive, services, mix of B2C and B2B
- Non-food consumer goods companies: somewhat environmentally sensitive, production of physical goods, primarily B2C

To select relevant companies, the overview webpages of the German and Danish stock exchange were consulted, which provide sector/industry categorisation of all listed companies (Deutsche Börse Group, 2018; NASDAQ, 2018).

[4] Pandora, Osram Licht

## 5. Discussion of the method

Content analysis was chosen for its advantage of reducing the data and complexity, thereby making it possible to compare the material and relate it to each other (Weber, 1990). This necessarily entails the loss of specific information, when large text passages are fitted into the categories and sub-categories of the coding frame. Many of the coded reports contained large amounts of information that was disregarded as it did not fit the categories of the coding frame. However, the main purpose of this paper was not to capture, present and compare all differences that can be found in the content of German and Danish CSR reports. To evaluate CSR report quality, it is necessary to only code information deemed relevant. The evaluation frame was created in a concept-driven, theory-based approach, but refined to fit the specific data at hand. Therefore, the loss of information in this research design yields substantially interesting and theoretically useful generalisations through the reduction of information in the coding frame and the following analysis (Weber, 1990).

Furthermore, consistency in the coding is crucial for the reliability of the results of content analysis. Reliability is closely related to stability, which concerns the consistency during the coding and invariability over time (Weber, 1990). Another component of reliability is reproducibility, which refers to inter-coder reliability or the stability in coding when coding is conducted by different coders. In this paper, all reports were coded by the author over a period of about ten consecutive weeks. During the pilot phase, all categories and sub-categories were defined and throughout the whole coding phase, examples for how passages had been coded were added to the definition and example sheet. The recoding after the first pilot coding resulted in an overall consistency of about 80%.

Besides consistency in the coding, another important problem when using content analysis concerns the validity of the variables that form the coding frame (Weber, 1990). Krippendorff argues that “a content analysis is valid if the inferences drawn from the available texts withstand the test of independently available evidence, of new observations, of competing theories or interpretations, or of being able to inform successful actions.” (2004, p. 313). Therefore, scholarly peer-reviewed articles from the relevant literature are used both to construct the coding frame and to triangulate the findings.

Another weakness of content analysis is the subjectivity entailed in the manual coding process, but also in the construction of the evaluation frame and the scoring (Hammond and Miles, 2004). Subjectivity makes it difficult to replicate the results and may cause contradicting findings. Furthermore, scoring is value laden and is impacted by previous knowledge, which makes consistency difficult to achieve in practice (Hammond and Miles, 2004). Therefore, concerns have been voiced about the comparability of studies using content analysis and their findings (Hooks and van Staden, 2011).

# V. Theoretical frame

## 1. Theoretical background

Companies publish CSR information for a variety of reasons (Deegan, 2002) and research has offered a number of theories to explain corporate CSR reporting. This section describes legitimacy, signalling and institutional theory, which form the theoretical foundation for this study.

### 1.1. Legitimacy theory

Legitimacy theory suggests that a company requires legitimacy, a social "licence to operate" to get access to the resources needed for successful business conduct (Deegan, 2002, p. 290). Organisations do not have an inherent right to exist, but depend on the acceptance of their business operation by society (Hahn and Kühnen, 2013). Thus, if society disapproves of how a company runs its business or perceives its operations as unacceptable, its legitimacy is threatened. CSR disclosure is a means to build and uphold a positive reputation and a licence to operate (Vormedal and Ruud, 2009). Michelon, Pilonato and Ricceri (2015) differentiate between a substantive and a symbolic approach to corporate legitimacy: under the former, corporations align their organisational strategies, processes and actions to social norms; under the latter, corporations engage in perception management attempting to "lead key stakeholders to mistakenly believe that the company is committed to social expectations" (Michelon, Pilonato and Ricceri, 2015, p. 60). Impression management strategies can aim at diverting attention away from poor performance or at overemphasising positive information, e.g. through thematic, visual or structural manipulation (Diouf and Boiral, 2017). Some find that CSR reporting decisions are mainly driven by legitimacy or reputational threats (Cho *et al.*, 2015) and companies use CSR reports primarily as means of greenwashing and aim at managing stakeholder perceptions to increase their perceived legitimacy (Cho and Patten, 2007; Mahoney *et al.*, 2013; Chauvey *et al.*, 2015). Others claim that "credible CSR reports can re-establish moral legitimacy by being credible tools that facilitate communication and thereby bridge the credibility gap*." (Lock and Seele, 2016, p. 187).*

### 1.2. Institutional theory

Building on legitimacy theory, institutional theory suggests that a company does not only follow a business rationale, but also answers to institutionalised expectations of its environment (Hahn and Kühnen, 2013). DiMaggio and Powell (1983) argue that in their quest for legitimacy, organisations respond to three mechanisms that drive organisational change, namely coercive, mimetic and normative isomorphism. Coercive isomorphism describes formal or informal pressures applied on an organisation by the legal environment, but also cultural expectations in society. Mimetic pressures work in a context of uncertainly

where organisations model themselves after other organisations that are perceived as more legitimate or successful. In the context of CSR reporting this happens when companies read their competitor's reports to benchmark and copy best practices (Hammond and Miles, 2004). Normative pressures primarily stem from professionalisation and worker fluctuation among firms within the same sector (DiMaggio and Powell, 1983). Organisations are expected to adapt to the environment by bringing its policies and practices in line with dominant social rules, norms and routines (Pedersen *et al.*, 2013). This implies that the adoption, extent and quality of CSR reporting should be expected to gradually align (Hahn and Kühnen, 2013).

### 1.3. Signalling theory

Signalling theory asserts that in situations where information is not equally distributed (information asymmetry), parties use signals to transmit information about themselves to others (Hahn and Kühnen, 2013). Signals are the actions of a company through which it indicates its intentions, motives and goals either directly or indirectly (Hetze, 2016). As a company's CSR performance is usually not fully visible to external observers, firms may engage in CSR disclosure to reduce the information asymmetry and signal their CSR commitment and engagement (Hahn and Kühnen, 2013). Thus, CSR reports can be seen as communication tools that signal social responsiveness to stakeholders in the pursuit of goodwill and reputational gains for the economic benefit of the company (Hetze, 2016). Galbreath (2010) distinguishes between symbolic and substantive signalling actions, depending on the amount of visible resource expenditure required for sending. Due to the resources committed to their production, CSR reports are classified as substantive signals (Hetze, 2016).

Most proponents of signalling theory suggest that CSR reports are voluntary signals that corporations send to the market about their superior commitment to CSR (Hetze, 2016). Their evidence suggests that companies that voluntarily issue (separate) CSR reports be tend to have higher CSR performance, and thus, these CSR reports are credible signals about superior CSR performance (Al-Tuwaijri, Christensen and Hughes, 2004; Clarkson *et al.*, 2008; Mahoney *et al.*, 2013). However, the effect of such signalling is impacted by whether the recipient perceives the information as credible and trustworthy (Hahn and Kühnen, 2013). Disclosing CSR information to the public opens a company up to scrutiny and potential criticism. CSR reporting has been criticised for "greenwashing", an attempt to cover poor performance by publishing lengthy CSR reports with little valuable information (Chauvey *et al.*, 2015; Michelon, Pilonato and Ricceri, 2015) or distract attention from non-sustainable practices (Parguel, Benoît-Moreau and Larceneux, 2011).

Signalling theory concerns the voluntary decision of a company to disclose CSR information. This poses the question of whether signalling theory is useful in the context of mandatory reporting. Most research using signalling theory concerns a company's decision to publish CSR information. However, for most of the period

under study, Danish companies are legally obliged to report on their CSR policies, activities and outcomes. The laws mandating CSR disclosure in Denmark (since 2009) and in Germany (since 2017) outline several categories that the companies must cover in their disclosures. Yet, they are quite broad and explicitly leave the companies leverage to make independent choices (e.g. how to disclose the information and whether to use an international reporting guideline). Therefore, signalling theory is still applicable in the context of this paper, because even under conditions of mandatory CSR reporting, companies are still free to make many important decisions regarding the content of their CSR disclosure.

## 2. Literature review: Factors impacting CSR report quality

A rich body of literature exist on factors impacting CSR reporting. This literature analyses the decision to voluntarily publish a CSR report (adoption of reporting), the extent of reporting (breadth and depth of issues covered) and the quality of information disclosed (Hahn and Kühnen, 2013). Following Hahn and Kühnen (2013), these factors can be grouped in firm internal determinants and external, contextual determinants.

### 2.1. Firm internal determinants

Some of the most prominent internal determinants of CSR report adoption, extent and quality are firm size and financial performance, social and environmental performance, ownership structure, managerial attitude and governance.

#### *2.1.1. Size and financial performance*

Firm size commonly measured in turnover, sales, total assets, number of employees or market capitalisation is widely acknowledged to positively impact the adoption and extent of CSR reporting (Fifka, 2013; Hahn and Kühnen, 2013). Large firms are assumed to be more visible and therefore are under greater media scrutiny and stakeholder pressure (Kolk and Pinkse, 2010; Sethi, Martell and Demir, 2017). Empirical results on the effect of profitability (measured by market returns, return on assets or return on equity) are inconclusive. It is argued that more profitable firms have the necessary financial leverage to incur the costs of CSR reporting and to bear potentially negative consequences of disclosing harmful information (Hahn and Kühnen, 2013). Some evidence supports this argument (Tagesson *et al.*, 2009). Proponents of signalling theory argue that these firms then are incentivised to disclose their CSR efforts to convey a positive social image (Al-Tuwaijri, Christensen and Hughes, 2004). On the other hand, legitimacy theory suggests that managers of poorly performing companies tend to enhance CSR reporting to improve the company's public image and draw attention away from the financial underperformance (Sethi, Martell and Demir, 2017).

Empirical evidence on the effect of firm size on CSR report quality is inconclusive. While some find evidence in favour of a positive effect of size on CSR report quality (Brammer and Pavelin, 2008), others find no support for such a relationship (Lock and Seele, 2016; Sethi, Martell and Demir, 2017).

### *2.1.2. Social and environmental performance*

Some suggest the number of environmental fines and penalties or amount of reported data on pollution and accidents as measures of social and environmental performance (Al-Tuwaijri, Christensen and Hughes, 2004). Others assume that such performance is reflected in international rankings, and use e.g. the Dow Jones Sustainability Index as a proxy for performance (Gao *et al.*, 2016). Legitimacy theory and signalling theory lead to conflicting expectations of the effect of environmental and social performance on CSR reporting. Proponents of legitimacy theory argue that companies showing poor environmental performance should be expected to disclose (positive environmental information) more extensively than high performing firms, because companies use CSR reporting to manipulate stakeholders' perception (Cho and Patten, 2007). By contrast, signalling theory suggests that firms with high environmental performance disclose more extensively than the poor performing firms, because they have positive signals to send (Al-Tuwaijri, Christensen and Hughes, 2004).

Empirical evidence is inconclusive. Some studies find that better performance increases CSR reporting extent and quality (Clarkson *et al.*, 2008; Clarkson, Overell and Chapple, 2011). For example, Al-Tuwaijri, Christensen and Hughes (2004) find that high-performing firms disclose more extensively specific and quantifiable environmental information which supports signalling theory's "good news" explanation. Others find that poorer performance leads to increased adoption and extent (Cho, Patten and Roberts, 2006; Cho and Patten, 2007). These authors claim that their results support legitimisation theory's allegation that companies use CSR reporting as a strategic tool to manage and shape stakeholder's perception. Hummel and Schlick (2016) find that high performance is positively associated with high quality disclosure, while poor performance is positive associated with low quality disclosure.

In sum, these studies indicate a significant, yet, ambiguous effect of social and environmental performance on CSR reporting (Hahn and Kühnen, 2013).

### *2.1.3. Ownership structure*

The literature uses ownership variables, such as listing on stock market, state-ownership, family-ownership, concentrated, dispersed or foreign ownership (Hahn and Kühnen, 2013). Listed firms must comply with specific regulation, attract more media attention and must satisfy their investors. Thus, empirical evidence indicates that listed companies are more likely to publish CSR reports of higher quality than private companies (da Silva Monteiro and Aibar-Guzmán, 2010; Sethi, Martell and Demir, 2017).

Furthermore, studies found that concentrated ownership (one investor controls more than 20% of shares) has a negative effect on CSR reporting, because the dominant shareholder has access to the information required. Therefore, the information asymmetry which is one of the drivers of CSR reporting is not as high as in a situation of dispersed ownership (Hahn and Kühnen, 2013). Evidence shows that concentrated ownership reduces the extent of reporting (Gamerschlag, Möller and Verbeeten, 2011). Brammer and Pavelin (2006) find a positive effect of dispersed ownership on adoption and on report quality. There is mixed evidence on the effect of foreign ownership. While some find a positive effect on the extent of disclosed information, others find no significant effect (da Silva Monteiro and Aibar-Guzmán, 2010; Hahn and Kühnen, 2013).

#### *2.1.4. Managerial attitude and governance*

Other internal determinants of CSR reporting are i.a. managerial attitude, firm culture and governance. Scholars predominantly find evidence for a positive correlation between managerial attitude or firm culture and CSR reporting (Fifka, 2013). Martin and Hadley (2008) find that scepticism and negative attitudes towards CSR reporting are among the most cited reasons for non-reporting. Herda, Taylor and Winterbotham (2012) find that governance also influences a firm's decision to voluntarily disclose: firms with a greater proportion of independent board members are more likely to issue separate CSR reports and also more likely to publish higher quality reports. Additionally, greater gender diversity on boards was found to positively impact CSR report extent (Garcia-Meca, Uribe-Bohorquez and Cuadrado-Ballesteros, 2018).

### 2.2. External determinants

External determinants of CSR reporting are i.a. sector affiliation, corporate visibility and country of origin.

#### *2.2.1. Sector/industry*

Industries differ in terms of the visibility of environmental issues, the environmental impact inherent in the business activities (Brammer and Pavelin, 2008). Affiliation with industries that have a high social and environmental impact is often found positively associated with CSR reporting extent and quality (Campbell, 2003; Brammer and Pavelin, 2008; Vormedal and Ruud, 2009; Gamerschlag, Möller and Verbeeten, 2011). Generally, the metals, resources, paper and pulp, power generation, water and chemicals sectors are categorised as environmentally-sensitive (Brammer and Pavelin, 2008). Companies from these sectors may feel increased stakeholder pressure for CSR reporting or face mimetic tendencies in the industry (Hahn and Kühnen, 2013).

#### *2.2.2. Corporate visibility*

Media exposure, branding-related aspects and the company's position in the supply chain have been used as proxies for corporate visibility (Hahn and Kühnen, 2013). Media exposure is assumed to be positively associated with extent and quality. Companies that feel closely scrutinised in public may broaden and deepen

their CSR reporting to mitigate reputational risks of bad press or reap advantages of good press (Hahn and Kühnen, 2013). Campbell (2003) finds that exposure to structural criticism stemming from sector-affiliation positively affects the extent of CSR reporting. He argues that this supports legitimacy theory's claim that companies use CSR reports as perception management tools attempting to manipulate their stakeholder's impression of the company to the positive. Other studies also find evidence in support of a positive effect of press coverage on CSR reporting extent (Gamerschlag, Möller and Verbeeten, 2011). Brammer and Pavelin (2008) on the other hand do not find that media exposure had a significant impact on CSR reporting. Thus, evidence on the effect of media exposure on CSR reporting is mixed.

Besides media attention, the supply chain position of a company can increase corporate visibility, for example through direct interaction with consumers (Hahn and Kühnen, 2013). Business-to-consumer (B2B) companies report to a greater extent than business-to-business (B2C) companies (Fifka, 2013; Hahn and Kühnen, 2013). Haddock-Fraser and Fraser (2008) find that companies that are close to market or are brand-name companies are more likely to engage in voluntary CSR reporting than B2B companies.

### *2.2.3. Country of origin*

Many studies have shown that reporting practices vary across countries and regions due to differences in the legal system, culture, social norms and regulation (Fifka, 2013; Hahn and Kühnen, 2013; Ali, Frynas and Mahmood, 2017).

Sethi, Martell and Demir (2017) find that firms headquartered in common law countries publish higher quality reports than firms from code law countries. They also find that CSR report quality is positively impacted by higher social provisions, strong national CSR traditions and societal expectations. The authors argue that this is supported by legitimacy theory: in such CSR environments an implicit contract between firms and society requires firms to live up to expectations for high quality CSR disclosure to attain their licence to operate. Some find that in general adoption and extent of CSR reporting increase with tighter regulation and in stronger legal environments (Herda, Taylor and Winterbotham, 2012; Hahn and Kühnen, 2013). By contrast, Lock and Seele (2016) find that the legislative environment (mandatory reporting requirements) does not impact report quality.

The impact of national culture and institutional structure on CSR reporting has been addressed by fewer studies (Fifka, 2013; Hahn and Kühnen, 2013). Representatives of this strain of literature argue that national culture impacts managerial assumptions, organisational structures and orientation towards CSR disclosure (Martínez-Ferrero and García-Sánchez, 2017). Haniffa and Cooke (2005) find that the cultural background of board members impacts CSR report content. Buhr and Freedman (2001) find culture impacts adoption and the extent of CSR reporting as well as the format chosen for the disclosure. Garcia-Sanchez et al (2016) argue

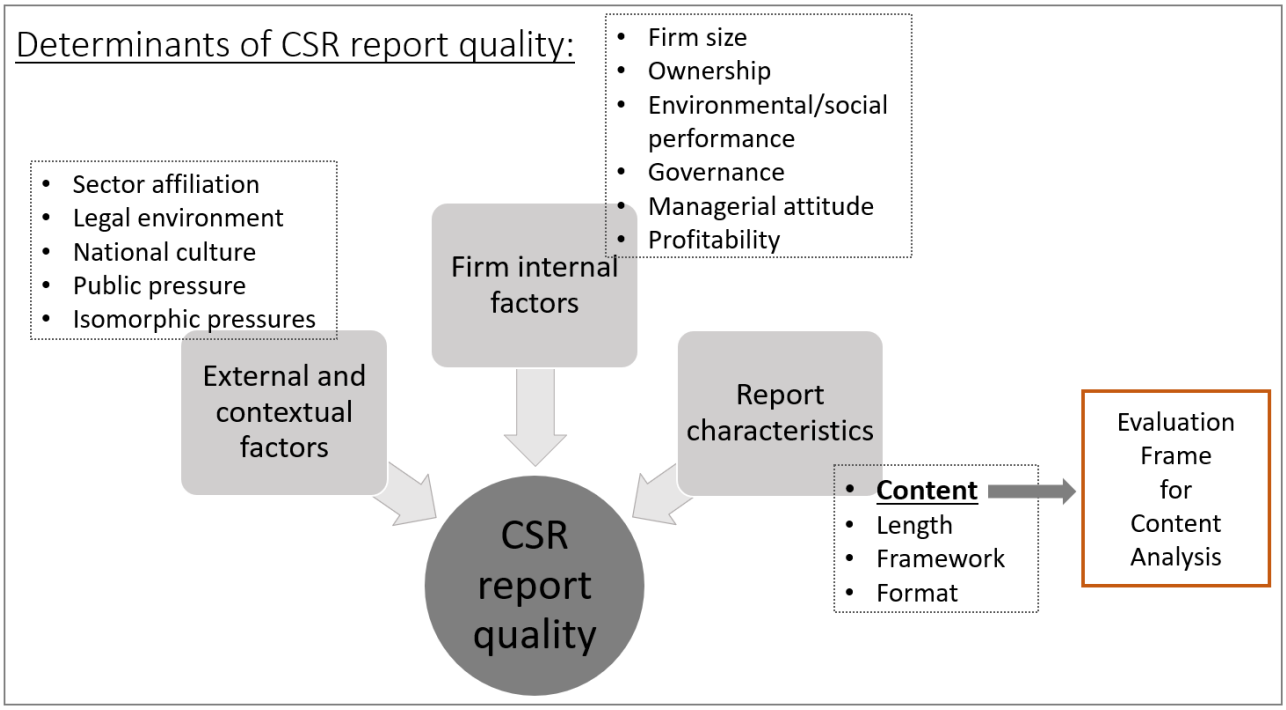
that cultural dimensions work as normative isomorphic pressures to which firms respond through CSR reporting. Matten and Moon (2008) suggest that systematic differences in fundamental institutions across countries foster a different (implicit vs explicit) approach to CSR.

### 2.3. Report characteristics

Literature on CSR report quality often applies content analysis to evaluate the content of CSR reports (Fifka, 2013; Hahn and Kühnen, 2013; Lock and Seele, 2016). Romolini et al (2014) found that the content of the CSR reports is the most important determinant of quality. Much research has been conducted on the impact of the length of the report and dilution of the information disclosed (Beretta and Bozzolan, 2004; Chauvey *et al.*, 2015; Michelon, Pilonato and Ricceri, 2015). By contrast, the impact of report format on report quality has not been covered as much. Michelon et al (2015) find that separate CSR reports are not superior in quality to information disclosed as part of a company's annual report. Chauvey et al (2015) also find that only the extent of disclosure increases in separate reports compared to CSR reporting in the annual report, but not the quality. Lock and Seele (2016) find that reports using international standards are more credible. This indicates that the reporting framework (e.g. GRI Guidelines) also impacts report quality (Hąbek and Wolniak, 2016).

### 2.4. Operationalising the theory for this paper

As summarised above, the literature has pointed to three different kinds of potential determinants of CSR report quality.



To determine the quality of a CSR report, the dependent variable in this research design, report content is coded using an evaluation frame. The next section describes the construction of this frame.

## 3. Building an evaluation framework in a concept driven way

This section reviews how literature and practice evaluate CSR report quality. Section 3.1. explains why readily available proxies for CSR report quality are not suitable for this paper. Section 3.2. describes the concept-driven construction of the evaluation frame used in the content analysis. Based on the conceptual work of Hess (2008) and literature on CSR report quality evaluation, a quality evaluation frame is developed consisting of four sub-scores: disclosure, dialogue, development and credibility.

### 3.1. Proxies for CSR report quality

Among the proxies used for CSR report quality are for example the CSR-S Monitor score (Sethi, Martell and Demir, 2017), the Transparency Benchmark score by the Ministry of Economic Affairs Netherlands (Gao *et al.*, 2016), or CSR report quality rankings issued by private consultancy firms or rating agencies/organisations (Li *et al.*, 2013; Hummel and Schlick, 2016). In Germany, the Institute for Ecological Economy Research (IÖW) is one of the leading scientific institutes in the field of practice-oriented sustainability research. Since 1994, the IÖW has evaluated and ranked the CSR reports of i.a. large listed companies and continuously issues detailed reports. In Denmark, FSR danske revisorer evaluates the quality of Danish firm's CSR reports and awards prices for the highest quality reports (CSR Rapporteringsprisen) (FSR, 2018). However, since both organisations only evaluate either Danish or German companies and because they use different score cards to evaluate CSR report quality, it is not possible to use these rankings as proxies in this paper.

Internationally, the GRI guidelines are the most widely-used CSR reporting framework, which makes them the "de facto international reporting standard" (Herda, Taylor and Winterbotham, 2012, p. 37). Some scholarly work draws on the GRI framework when evaluating the quality of CSR reports and in parts incorporate them into their own quality score (Clarkson *et al.*, 2008; Martínez-Ferrero, Garcia-Sanchez and Cuadrado-Ballesteros, 2015; Michelon, Pilonato and Ricceri, 2015; Hąbek and Wolniak, 2016). Herda, Taylor and Winterbotham (2012) evaluate CSR report quality according to the GRI G3 level of the companies in their sample: 1) very high quality for G3 levels A or B, 2) entry-level C reporting or firms that merely refer to some GRI information, 3) firms do not refer to any guidelines in their reports and 4) non-reporting firms. They acknowledge that a limitation of using GRI levels as determinants of report quality is that these levels are self-declared by the companies "and therefore may not truly reflect the extent and quality of the report" (Herda, Taylor and Winterbotham, 2012, p. 39). Thus, taking the self-reported compliance with the GRI framework the determinant of quality is insufficient.

In sum, none of the readily available potential quality measures are suitable for the purpose of this study. Yet, there is no widely acknowledged framework or "best practice approach" for how to measure the quality of CSR reports and suggestions for evaluations tools differ widely in scope and parameters used. Most of these evaluation metrics involve subjective judgment made by the researchers, which makes the findings difficult to replicate or build on (Herda, Taylor and Winterbotham, 2012). This makes it necessary to construct an evaluation frame drawing on insights from the literature to evaluate the quality of the CSR reports in the sample under study here.

## 3.2. Constructing an evaluation frame

The literature suggests a wide variety of different evaluations frameworks and score cards. To combine some of the approaches applied by other scholars into an evaluation frame, this paper draws on the conceptual work by Hess (2008) to provide the underlying theoretical structure.

Hess (2008) outlines three pillars of CSR reporting: disclosure, dialogue and development. According to Hess, proper disclosure on relevant issues using standardised and comparable data related to performance is the foundation for stakeholder dialogue. It reduces information asymmetry and enables effective scrutiny. A company should seek dialogue with its stakeholders to understand their expectations and receive feedback on its CSR performance. The goal of CSR reporting is to facilitate corporate change towards more sustainable behaviour. This development is caused by external pressure or internal change after self-critical reflection on the CSR reporting. To serve as a structure for the CSR quality evaluation, Hess' three pillars can be understood as three parts of an equation:

$$\boldsymbol{CSR\ report\ quality = disclosure + dialogue + development}$$

This section draws on previous research to turn the conceptual pillars into categories in an evaluation frame that is used for coding in the following content analysis.

### *3.2.1. Disclosure*

According to Hess, disclosure consists of two parts: 1) *relevant issues* and 2) s*tandardised and comparable data related to performance*.

The first part concerns what is reported on, namely the content measures. Among the most used categories for CSR report quality evaluation frames (though sometimes under differing labels and in different combinations) are environmental impact, economic impact, philanthropy and community involvement, employee matters, human rights, supply chain and product responsibility, and anti-corruption (Jizi *et al.*, 2014; Global Reporting Initiative, 2015b; Michelon, Pilonato and Ricceri, 2015; Hąbek and Wolniak, 2016; FSR, 2017; Sethi, Martell and Demir, 2017; Westermann *et al.*, 2018). The EU non-financial reporting Directive

requires the companies falling under its scope to report on four CSR categories: environmental impact, social and employee matters, human rights impact, and corruption and anti-bribery matters.

Therefore, the following topics are included as main categories of the DISCLOSURE sub-score in the evaluation frame: 1. Environmental impact, 2. Employee welfare, 3. Business Ethics, 4. Human Rights, 5. Community involvement, 6. Economic impact and 7. Supplier management.

Environmental impact can be divided into input such as the use of raw materials, energy, water, etc. and output, capturing i.a. emissions (Cho, Patten and Roberts, 2006; Hooks and van Staden, 2011; Michelon, Pilonato and Ricceri, 2015; Sethi, Martell and Demir, 2017). Thus, *input* and *output* form sub-categories in the *environmental category*. The Employee welfare main category initially consisted of three sub-categories, namely *occupational health and safety, equal opportunities and diversity* as well as *labour-management relations* (Jizi *et al.*, 2014; Hummel and Schlick, 2016; Sethi, Martell and Demir, 2017). During the pilot coding phase, a fourth sub-category was added, *work-life balance* to capture efforts to keep employees healthy going beyond the prevention of work-related accidents and illness as captured in the health and safety sub-category. The category *Business Ethics* captures a company's efforts to avoid corruption and bribery, e.g. through trainings, codes of conduct and a whistleblowing system (Michelon, Pilonato and Ricceri, 2015; Sethi, Martell and Demir, 2017). The category *Human Rights* captures a company's efforts to avoid human rights violations, e.g. through company policies and training (Michelon, Pilonato and Ricceri, 2015). *Community Involvement* captures a company's efforts to engage with the local community in ways going beyond donations, e.g. through the development of shared-value products (Moratis and Brandt, 2017). The last category, *Supplier Management* is divided into three sub-categories, namely, supplier management regarding matters of the environment, business ethics or human rights and captures a company's efforts to ensure responsible conduct in its supply chain (Moratis and Brandt, 2017).

The second part of disclosure, according to Hess, concerns how the information is reported. Comparability is an important reporting principle; however, it is not the only one worth accounting for. Therefore, a fourth dimension is added to the equation that represents all reporting principles: credibility, which is addressed below.

### *3.2.2. Dialogue*

*Dialogue*, according to Hess (2008) concerns the interaction between the company and its stakeholders. It is often mentioned that the report content must be relevant for the company's stakeholders (AccountAbility, 2008; Diouf and Boiral, 2017; Sethi, Martell and Demir, 2017). Solomon (2000) emphasises the importance of addressing the users of the reports and catering to their specific information needs in decision-making (decision-usefulness of the information provided). Consequently, addressing the relevant stakeholders, as

well as indicators for stakeholder dialogue and feedback are commonly used quality evaluation (Hąbek and Wolniak, 2016; Lock and Seele, 2016; Sethi, Martell and Demir, 2017). Thus, the first sub-category in the coding frame is *Addressing relevant stakeholders*. This is defined as mentioning and describing the stakeholders of the company. The GRI defines stakeholders as "entities or individuals that can reasonably be expected to be significantly affected by the organization's activities, products, and services; and whose actions can reasonably be expected to affect the ability of the organization to successfully implement its strategies and achieve its objectives." (Global Reporting Initiative, 2015a). In practice, opinions differ widely on how broad the term stakeholder should be interpreted (Solomon, 2000; Hess, 2008; Moratis and Brandt, 2017). As the sample companies come from different sectors and differ greatly in terms of their business conduct, it would not make sense to narrowly define which groups would be counted as stakeholders in the coding frame. Therefore, the category kept open and an evaluation of the depth and breadth of information that companies provide about their stakeholders is made through the score (described below).

Freundlieb, Gräuler and Teuteberg (2014) argue for inclusion of stakeholders in the quality evaluation process. Moratis and Brandt (2017) outline stakeholder engagement methods, such as mailed questionnaires, Internet bulletin boards, phone surveys, written feedback, social media, focus groups, corporate advisory panels, community-based open meetings as a non-exhaustive list of examples. They identify different engagement methods for the different stakeholder groups and distinguish between one-way, two-way and multi-way engagement. Therefore, the categories, *Stakeholder engagement, Contact point and contact information, Two-way engagement* and *Multi-way engagement* are added under the *DIALOGUE* sub-score. *Stakeholder engagement* captures the description of how the company engages with its different stakeholder groups. *Contact point and contact information* captures whether a company provides the readers of the report with an immediate contact point and encourages feedback. The sub-categories *two-way and multi-way engagement* capture how detailed a company describes these means of stakeholder engagement using the definition provided by Moratis and Brandt (2017).

### *3.2.3. Development*

*Development* indicates that the company is committed to CSR and has learned from the stakeholder dialogue or at least reacts to external pressure. The literature suggests to measure this by looking at the corporate governance form (e.g. the existence of a CSR Committee on the board), evaluate whether the report contains elements that indicate forward-orientation, like expectation and goals, programmes and policies (Michelon, Pilonato and Ricceri, 2015), and indications of a long-term commitment to CSR (e.g. an explicit CSR strategy). Another indicator for development is references in the report explaining how the company's has changed its behaviour, codes of conduct, operations, procedures etc as a result of the stakeholder engagement.

Therefore, four categories are added under the *DEVELOPMENT* sub-score in the evaluation frame. *Forward orientation* captures whether the report contains expressions of expectations, future-oriented programmes and goals that the company has set to meet, instead of only reporting on past events. The category *CSR strategy* captures whether the report mentions CSR as a long-term strategy and how aspects of CSR are integrated in the overall business conduct and the corporate strategy. The third category, *Critical reflections*, was added during the pilot coding phase to capture that some companies critically reflect on their CSR efforts or describe their dilemmas. For example, reflecting over whether employees may experience health checks as intruding their private sphere or setting a cap on overtime can potentially bring workers that have relied on the extra income from excessive overtime work into a financially precarious situation[5]. The fourth category, *Indications of learning*, captures whether there are indications or explicit reference in the report of how the company has learned from the stakeholder dialogue.

In sum, these three parts, DISCLOSURE, DIALOGUE and DEVELOMENT, make up the content dimension in the evaluation framework. However, this does not fully cover all the aspects mentioned in the reviewed literature. Following Habek and Wolniak (2016), *credibility* is added to the equation to address some arguments from the literature on reporting principles.

### *3.2.4. Credibility*

In line with the logic applied i.a. in the GRI Reporting Guidelines, the evaluation frame here distinguished between content measures (DISCLOSURE, DIALOGUE and DEVELOPMENT) and report credibility understood as measuring the overall reliability or trustworthiness of the disclosed information (Chauvey *et al.*, 2015; Global Reporting Initiative, 2016). Lock and Seele (2016) argue that low credibility of CSR reports challenges the trust that stakeholders have in these reports as tools of communication, the practice of CSR and the moral legitimacy of corporations in society.

Solomon argues that an easy way to "establish more structure and definition" in CSR reporting is to "use the existing financial reporting conceptual framework as a basis" for creating a CSR report quality evaluation framework (2000, p. 31). Following this line of argument, Chauvey et al (2015) use the traditional accounting principles of relevance, comparability, verifiability, clarity and neutrality to evaluate the quality of CSR reports. Hummel and Schlick (2016) also argue that report quality depends on the same reporting principles that are used for determining the quality of financial reports. They mention verifiability, reliability, comparability and consistency. The following section discusses the six reporting quality principles as defined in the literature, which also form the six sub-categories for the CREDBILITY sub-score.

[5] Danske Bank 2011, Pandora 2011

The first category is *Accuracy*. Accuracy is also described as verifiability (Chauvey *et al.*, 2015) or consistency (Hummel and Schlick, 2016). According to the GRI, "the reported information shall be sufficiently accurate and detailed for stakeholders to assess the reporting organization's performance" (2016, p. 13). Accuracy concerns the nature of the information provided and the usefulness to stakeholders. Qualitative statements must be consistent with other reported information (Global Reporting Initiative, 2016). For the report to be accurate, companies must adequately describe their data measurement techniques, lay open their basis of calculation and show that their results are replicable without significant deviance (Diouf and Boiral, 2017).

*Balance*, also described as neutrality (Chauvey *et al.*, 2015), is the second category of CREDIBILITY. It means reporting about positive and negative aspects of the reporting organisation's performance to allow for an informed assessment of its overall performance (Global Reporting Initiative, 2016). The predominance of positive elements in the majority of CSR reports is widely criticised as greenwashing (Lock and Seele, 2016). Reporting on negative CSR performance is seen as indicating balanced reporting (Michelon, Pilonato and Ricceri, 2015). Hammond and Miles (2004) argue that this is a dubious quality measure as it can be used to draw attention away from more serious issues and thus be utilised as a means of legitimation. While reporting about the lesser evil can be used as a tactic to draw attention away from greater failures, it nevertheless allows for more balanced assessment than a report that only contains positive achievements. Thus, reporting negative results is used as an indicator for report balance.

The third category is *Clarity*, which means that reports must present the information in an "understandable and accessible" manner (Global Reporting Initiative, 2016, p. 14). Stakeholders must be able to find the information they are looking for without unreasonable effort. Thus, quality reports explain technical terms and avoid jargon or acronyms that may limit understanding (Global Reporting Initiative, 2016). Further, the GRI recommends the use of graphical illustrations in support of the data. Language can be used to hide poor performance behind vague or ambiguous words and phrases. It is difficult and subjective to evaluate whether language is used to conceal meaning. Therefore, here more tangible parameters, such as use of graphical illustrations, clear headlines and table of content are used as indicators of clarity.

The next category is *Comparability*. Comparability enables the reader of the report to analyse changes in economic, environmental and social performance over time or across different organisations (Global Reporting Initiative, 2016). Practitioners and scholars stress the importance of evaluating whether a company includes long-term trends and key performance indicators (KPIs) in its CSR report (Romolini, Fissi and Gori, 2014; FSR, 2017). Hammond and Miles (2004) find that industry representatives themselves regard setting benchmarks and reporting against them as indicators for report quality. Therefore, *Comparability* here is

defined as providing data from more than the current time period or the provision of benchmarks (e.g. describing how the company performed against its self-set goal, how it lives up to industry or legal standards).

The fifth category is *Reliability*. Reporting and presenting not only relevant information, but also laying open the processes followed when preparing the CSR report in a way that "can be subject to examination and that establishes the quality and materiality of the information" increases reliability of the report (Global Reporting Initiative, 2016, p. 15). A third-party should be able to review the report and reach the same conclusions as the producers of the reports within acceptable margins of error (Global Reporting Initiative, 2016).

To summarise the discussion in the literature, many consider external audits and third party assurance as means to ensure reliability and bridge the credibility gap (Hąbek and Wolniak, 2016; Lock and Seele, 2016; Sethi, Martell and Demir, 2017). Others doubt the independence and ability of external auditors and thus question the usefulness of including assurance as an indicator for measuring quality (De Beelde and Tuybens, 2015). Hammond and Miles (2004) stress that third party verification of the CSR reports is generally seen as a quality stamp that improves the credibility of the reports. However, they also point out that audit methods and quality by professional quality assessors varies greatly. Solomon claims that "financial auditors lack independence and the appropriate expertise to deal with environmental disclosure" (2000, p. 35). However, research has found that at least some stakeholders like social investors and shareholders value external auditing of CSR reports for adding credibility (De Villiers and Van Staden, 2011; de Villiers and van Staden, 2012; Diouf and Boiral, 2017). Yet, the level of reliability of the auditing process is closely connected with the independence and experience of the auditor (Martínez-Ferrero, Garcia-Sanchez and Cuadrado-Ballesteros, 2015; Diouf and Boiral, 2017). In conclusion, assurance by independent and experienced external auditors is included as an indicator for reliability.

Finally, the information must be accessible to stakeholders regularly and in a timely manner that allows them to make informed decisions (Global Reporting Initiative, 2016). According to Diouf and Boiral, "frequency and periodicity are two important aspects of timeliness that contribute to allowing information to be both accessible to stakeholders and comparable with that of other companies." (2017, p. 646). Hence, *timeliness* is added as the sixth category of the CREDBILITY sub-score.

In sum, the CSR quality score to be used in this paper is the sum of all four sub-scores.

$$\boldsymbol{CSR\ report\ quality = DISCLOSURE + DIALOGUE + DEVELOPMENT + CREDIBILITY}$$

These four sub-scores and their categories and sub-categories form the coding frame for the content analysis in this paper.

### *3.3. Scoring system*

The most simple way is to score items in a binary manner of disclosure vs non-disclosure and aggregate them into an overall quality score (Hummel and Schlick, 2016). Michelon, Pilonato and Ricceri criticise that this "does not sufficiently capture the complexity of the information that management can communicate on the social and environmental impact of their companies" (2015, pp. 64, 65). A more sophisticated way that is often used in the literature is to give a minimum number of points (usually one) for mere disclosure of an item and award additional marks for higher "levels of scope, breadth and depth of reporting, thereby enabling direct benchmarking between peers." (Hammond and Miles, 2004, p. 61). The disclosure of quantitative data, particularly if offered as a benchmark, is often evaluated as superior to qualitative information (Al-Tuwaijri, Christensen and Hughes, 2004; Jizi *et al.*, 2014; Michelon, Pilonato and Ricceri, 2015; Hąbek and Wolniak, 2016).

Based on the work of Jizi et al (2014), Ruud and Vormedal (2009) and Hooks and van Staden (2011) the following scoring system was applied when coding the information[6].

| ***Points given*** | ***Description*** |
|---|---|
| 0 | no disclosure of relevant information, only unspecific declarations |
| 1 | minimum coverage, lack of detail – information is provided in a generalising, anecdotal, abstract, isolated or very brief manner |
| 2 | mentioning with some detail, covering at least one part of the sub-indicator with great detail and/ or concrete examples or more than one with some detail and short examples |
| 3 | covering most of the parts mentioned in the definition of a given sub-indicator with some detail or minimum two with great detail and/or concrete examples |
| 4 | covering all parts mentioned in the definition of a given sub-indicator with great detail or reporting with extraordinary detail and concrete examples |
| +1 bonus point | quantitative information: clearly defined in monetary terms, physical quantities, total numbers of incidents or percentages and the like |

## 4. Expectations

Based on the literature review in section V.2. it is expected that many different factors influence the CSR report quality of German and Danish firms. However, empirical evidence on most of the determinants of CSR reporting is mixed and/or concerns adoption or extent of reporting rather than report quality. Yet, it is

[6] See coding frame for small variations.

expected that the following factors positively influence CSR report quality: firm size, affiliation with an environmentally-sensitive sector, legislation on mandatory CSR reporting. The following analysis will therefore focus on these three factors but also point out indications for the impact of other factors mentioned in the literature.

# VI. Analysis and discussion of observations

This part presents and analyses the findings from the content analysis of the 150 CSR reports to answer the question of how CSR reporting differs between German and Danish listed companies and what may explain these differences with a particular focus on the impact of legislation. CSR reporting became mandatory in Denmark in 2009 and in Germany in 2017. The described changes in legislation affect all sample companies from a given country in the same way.

First the total quality score is analysed, which is the simple aggregate of the four sub-scores of the evaluation frame (DISCLOSURE, DIALOGUE, DEVELOPMENT and CREDIBILITY). After looking at the overall report quality, the analysis addresses each of the four sub-scores to present a more differentiated picture of how CSR reporting differs across German and Danish companies and what may explain these differences. This part of the analysis focuses on firm size, sector affiliation and differences in CSR reporting legislation. Thereafter, differences in report characteristics are addressed, such as the choice of report format. As a part of this, the analysis zooms in on separate CSR reports to analyse differences in the choice of reporting framework, length and what can be inferred from these differences about the companies' motivations to publish a report. Consequently, some of the other potential determinants of CSR report quality, such as national culture and ownership, are addressed, and indications presented about their impact on differences in reporting and report quality.

Instead of discussing the findings in the end, supporting or contradicting findings in the literature are addressed and discussed continuously throughout this analysis.

## 1. Total Quality Score

The total quality score is a simple aggregate of the four sub-scores (DISCLOSURE, DIALOGUE, DEVELOPMENT, CREDIBILITY). The maximum possible score is 110 points (of these 15 are bonus points for providing quantitative information or information on certifications), thus the highest score without any bonus points is 95. The highest score reached in the sample is 69 by a medium-sized German pharma company.

## 1.1. Size

According to the literature summarised above, larger companies issue more extensive CSR reports which also may be of higher quality.

Tables 3 and 4 show that the sample companies differ significantly in size. Also, some companies' size changes significantly over time. Yet, whether measured in total annual revenue or as number of employees, the German companies are significantly larger than the Danish companies in all years.

**Tables 3 & 4: Overview of Revenue and number of employees**

| Total revenue in €m | | Smallest | Largest | Mean | Median |
|---|---|---|---|---|---|
| 2008 | Germany | 226 | 62.304 | 14.581 | 4.358 |
| | Denmark | 10 | 52.631 | 5.179 | 921 |
| 2011 | Germany | 227 | 73.497 | 13.736 | 4.910 |
| | Denmark | 43 | 51.788 | 4.665 | 892 |
| 2014 | Germany | 223 | 74.326 | 13.256 | 4.826 |
| | Denmark | 58 | 42.554 | 4.367 | 1.511 |
| 2017 | Germany | 234 | 64.475 | 13.374 | 4.128 |
| | Denmark | 72 | 26.608 | 4.016 | 1.109 |

| Number of employees | | Smallest | Largest | Mean | Median |
|---|---|---|---|---|---|
| 2008 | Germany | 971 | 456.716 | 51.546 | 13.058 |
| | Denmark | 309 | 119.599 | 6.364 | 2.337 |
| 2011 | Germany | 1.032 | 471.654 | 55.487 | 17.168 |
| | Denmark | 181 | 117.080 | 12.157 | 2.360 |
| 2014 | Germany | 844 | 488.824 | 55.989 | 16.703 |
| | Denmark | 173 | 89.200 | 11.560 | 2.605 |
| 2017 | Germany | 744 | 519.544 | 58.589 | 13.811 |
| | Denmark | 257 | 85.667 | 13.162 | 3.111 |

Plotting all companies' total quality score and their total revenues for all four years respectively (graph 1) shows that in 2008, most observations are clustered in the bottom left, where 22 out of 36 reports reach a Total quality score below 20, 10 of them at 0. After 2008, no Danish report scored 0 anymore, while 3 German reports score 0 in 2011 and one in 2014. In 2017 no report scores 0. In 2011, the cluster has dissolved, and the observations seem more evenly distributed across a range of 0 to 60 points. The highest Total quality score in the sample is found in 2014 at 69.

**Graph 1: Scatterplots of mean Total quality score and total revenue**


The plots show that the overall CSR report quality seems to improve over time. Remarkably, no 2017 report score below 10. However, the overall CSR report quality level in the sample is rather low considering that the maximum possible score is 110.

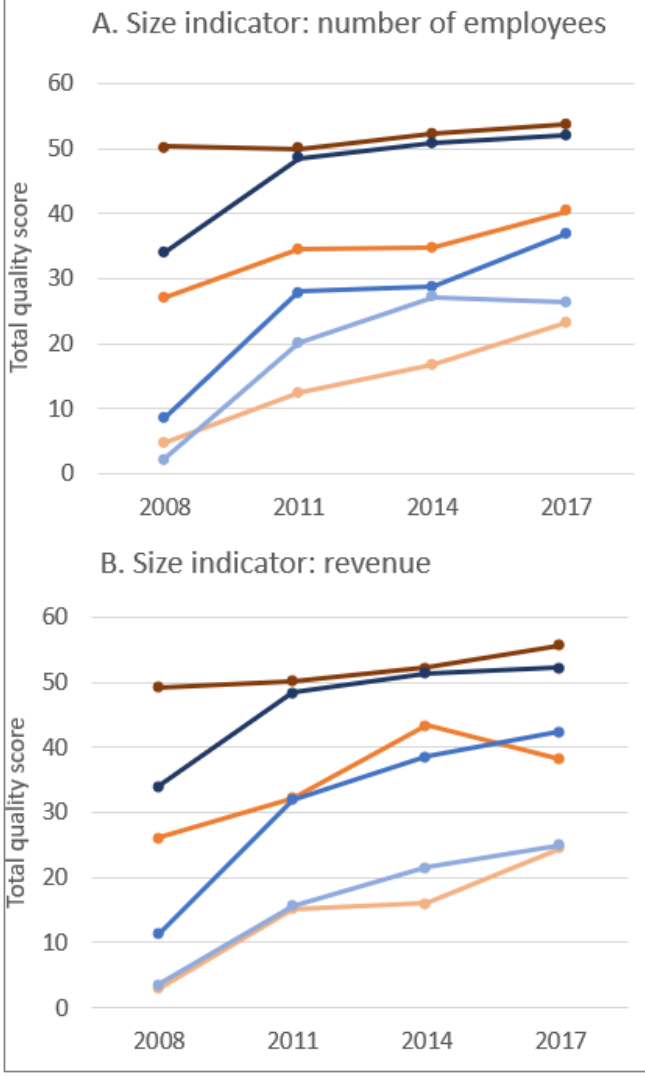
Comparing the plots of the Danish reports over time indicates that the introduction of mandatory reporting in 2009 led to a continuous decrease in reports that score below 20 combined with an increase in reports that score above 30 in the years 2011-2017 compared to 2008. The highest Danish score in 2008 is 56, 60 in 2011, 59 in 2014 and 60 again in 2017. In 2008 only one Danish report scores at least 50, compared to 2 in 2011, 3 in 2014, and 4 in 2017. The introduction of mandatory reporting requirements likely contributed to the increase of the overall average report quality from 14,3 in 2008 to 30,3 in 2011 and fostered the further improvements to 34,2 in 2014 and 38,2 in 2017. As the plots indicate, this development is mainly driven by a reduction in the number of reports scoring below 20 and an increase in reports scoring between 20 and 50. However, even under conditions of mandatory reporting (2011-2017) very few Danish reports score above 50. This suggests that in the Danish sample, mandatory reporting has improved the overall quality level by lifting the quality floor (the lowest Danish score was 0 in 2008 and 12 in 2017) but without lifting the quality

ceiling by the same magnitude (the highest Danish score was 56 in 2008 and 60 in 2017). The German sample shows a similar observation, where the lowest score from 2008-2014 was 0 under conditions of voluntary reporting, which increased to 14 in 2017 after mandatory reporting was introduced. However, the highest score from 2008 to 2014 was 69, compared to 62 in 2017. The number of German companies that score at or above 50 is 2 in 2008, 7 in 2011, 6 in 2014 and 2017. Thus, also for the German sample, mandatory reporting seemingly contributed to lifting the quality floor but did not increase the quality ceiling.

Previous research has found that company size affects the quality of CSR reports (Gao *et al.*, 2016; Sethi, Martell and Demir, 2017). To analyse this in more detail, the sample companies are grouped into small, medium and large size segments. The significant size difference between the German and Danish companies indicates that the home country affects firm size. Therefore, German and Danish companies are grouped into large, medium-sized and small using different cut-off points depending on the size of the other sample companies from the same country. This means that companies are grouped not by their absolute size, but "country-relative" size. As the above scatterplots show, a few companies from both countries are significantly larger than the rest. This is reflected in a mean that is much larger than the median for all years in both countries. Therefore, for each country and year, companies above the mean are considered large, companies from the mean to half the median are considered medium-sized and companies smaller than half the median are considered small. In each size segment the German companies are larger than the Danish companies. Yet, despite the differences in absolute size it makes sense to group companies into size segments relative to the size of other companies from the same country. Previous literature has found that company size is a proxy for its visibility, which was found to impact CSR reporting. Thus, even though the Danish large segment is much smaller than the German large segment, the companies in this segment are among the largest in each country and can thus be expected to receive significant attention by domestic media, pressure groups and regulators.

Grouping companies by size leads to partially different categorisations depending on whether total revenue or number of employees is used as a size indicator. This is reflected in graph 2 below showing the mean Total quality score per size segment and country, where in 2.A. companies were grouped by the size of their workforce and in 2.B. by total revenue.

**Graph 2: Mean Total quality score per size segment**




| Overall mean Total quality score | | | | |
|---|---|---|---|---|
| | **2008** | **2011** | **2014** | **2017** |
| GER | 24,8 | 31,7 | 33,7 | 38,7 |
| DK | 14,3 | 30,3 | 34,2 | 38,2 |

| Changes in mean Total quality score (points) | | | | |
|---|---|---|---|---|
| **Graph A** | **2011** | **2014** | **2017** | **2017-2008** |
| Large - GER | *-0,3* | *2,3* | *1,5* | *3,5* |
| Large - DK | *14,5* | *2,3* | *1,4* | *18,2* |
| Medium - GER | *7,5* | *0,2* | *5,6* | *13,3* |
| Medium - DK | *19,4* | *0,7* | *8,3* | *28,4* |
| Small - GER | *7,7* | *4,3* | *6,6* | *18,6* |
| Small - DK | *17,9* | *7* | *-0,8* | *24,1* |
| *All - GER* | *6,9* | *2* | *5* | *13,9* |
| *All - DK* | *16* | *3,9* | *4* | *23,9* |

| Changes in mean Total quality score (points) | | | | |
|---|---|---|---|---|
| **Graph B** | **2011** | **2014** | **2017** | **2017-2008** |
| Large - GER | *1,1* | *2* | *3,4* | *6,5* |
| Large - DK | *14,5* | *2,8* | *1* | *18,3* |
| Medium - GER | *6,2* | *11,1* | *-5,1* | *12,2* |
| Medium - DK | *20,5* | *6,8* | *3,8* | *31,1* |
| Small - GER | *12,2* | *0,8* | *8,6* | *21,6* |
| Small - DK | *12* | *6* | *3,4* | *21,4* |

Graph 2 shows that the means of the large segment are not much affected by which size indicator is used for grouping. Thus, the choice of size indicator affects the observations, because it affects the composition of companies for each segment. The difference is most visible for the Danish small and medium-sized companies. However, the graphs clearly show that no matter which size indicator is used, within a given country sub-sample, average report quality is highest among the large companies followed by medium-sized companies, with the small companies scoring lowest. This is in line with previous research (Gao *et al.*, 2016; Sethi, Martell and Demir, 2017).

In 2008, neither country had specific CSR reporting regulation. Denmark introduced mandatory reporting in 2009 with a minor change in 2013 and a tightening of the requirements in 2016. Germany only introduced mandatory reporting requirements in 2017. Hence, by 2017, Germany and Denmark had very similar legislation based on EU law. Thus, for the years 2008 to 2014, the German companies' average scores may

serve as a “control”, while the Danish companies’ means received a “treatment” in form of legislative changes that may be reflected in reports of the years 2011 and 2014.

In 2008, under conditions of voluntary reporting, the reports of German large and medium-sized companies were of higher average quality than their Danish counterparts. In the small segment, by contrast, the average report quality of German and Danish companies is very close. This indicates a country of origin effect in the absence of legislation. As mentioned, the home country seems to impact firm size: the German companies of all size segments are significantly larger than the Danish companies in the same size segment. As the illustration in Appendix 4 shows, the large German companies are much larger than the large Danish companies, which are of comparable size to the medium-sized German companies. Also, the Danish medium-sized companies are of comparable size to the German small companies, while the Danish small companies are by far the smallest group of companies in the sample. Thus, the 2008 average quality scores in the large and medium-sized segments seem to reflect differences in the absolute size between German and Danish companies. It is concluded that in the absence of mandatory CSR reporting requirements, firm size seems to affect CSR report quality in absolute terms. On the other hand, the higher German overall mean may also reflect differences in culture or approaches to CSR in Germany and Denmark. Previous literature found that culture and stakeholders’ expectation regarding CSR efforts and reporting differ across countries, which affects companies’ CSR reporting (Einwiller, Ruppel and Schnauber, 2016). Also, the observations in the small segment suggest a country of origin effect beyond firm size that leads to similar report quality of small German and Danish companies despite their size difference. Differences in national culture may affect what society expects of small companies in Germany and Denmark, and thus affect their CSR report quality.

In both graphs, the average quality of Danish companies of all size segments jumps up from 2008 to 2011 by 12 to 20 points followed by more incremental increases, suggesting a reaction to the introduction of mandatory reporting legislation in 2009 and the changes in 2013 and 2016 (Pedersen *et al.*, 2013). Overall, both in graph 2A and 2B, among the Danish companies the mean of the medium-sized segment increases the most from 2008 to 2017 indicating that the medium-sized Danish companies responded most strongly to the changes in Danish CSR reporting regulation. Yet, in 2011 and 2014, still the large and medium-sized German companies (reporting voluntarily) reached higher average quality scores than their Danish counterparts that face legal reporting requirements. However, mandatory reporting seemingly lifted the average quality of the large Danish companies to a similar level as the large German companies, that reported voluntarily, in 2011 and 2014. Also, the gap in average quality between German and Danish medium-sized companies in 2011 and 2014 narrows significantly compared to 2008 after the Danish companies became obliged to report. This indicates that mandatory reporting seems to mediate the effect of absolute size differences between

companies from different countries through a positive impact on the report quality of comparatively smaller companies. In graph 2A, the small Danish companies reach significantly higher levels of average report quality under conditions of mandatory reporting than the small German companies that do not face legal reporting obligations in 2011 and 2014. In graph B, this is only the case in 2014. This indicates that mandatory reporting through the positive effect on the report quality of the small Danish companies increases their average quality to a level higher than the comparatively larger small German companies.

The German sample companies do not seem to respond with the same magnitude to the change in German legislation in 2017 as the Danish companies responded to the change in Danish legislation in 2009. Also, in both graphs, the average quality of German medium-sized and small companies' CSR reports shows an upward trend, thus, the increase from 2014 to 2017 may not only be a reaction to the change in German CSR reporting legislation. Among the German companies, it is the small segment that shows the greatest increase from 2014 to 2017, suggesting that the small German companies responded most strongly to the change in German legislation. In 2017, as both countries have similar mandatory reporting requirements, the differences in average quality of German and Danish companies of the same size segment are quite close. This indicates that similar regulation leads to similar quality as would follow from institutional theory (coercive pressures).

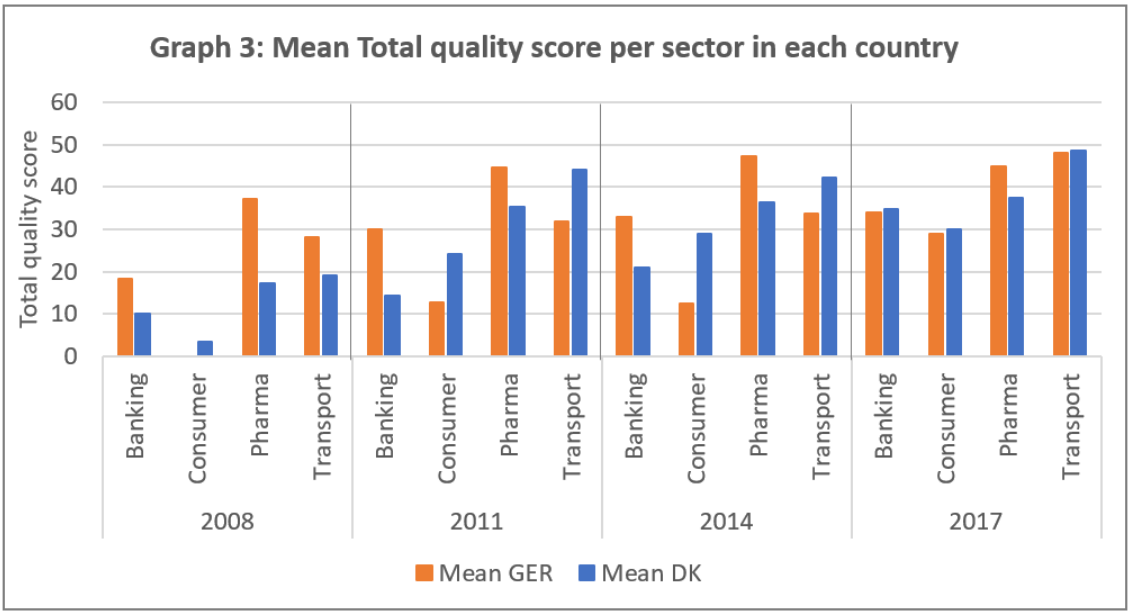
Particularly, average report quality of the large German companies does not change much over time and there is no strong reaction to the change in law in 2017. This may indicate that above a certain quality level, companies are less responsive to CSR regulation. Also, the large Danish companies do not seem to respond to the changes in Danish legislation in 2013 and 2016. Alternatively, this may be interpreted as indicating that companies of a certain size respond to other forces than legal regulation, particularly in the light of the constantly high average quality of large German company's reports, both under conditions of voluntary (2008-2014) and mandatory reporting (2017). The literature has pointed to the effect of isomorphic pressures, customer and investor expectations, as well as public visibility to which large companies may be more exposed than smaller companies (Fifka, 2013). However, as previous research and the pilot coding has shown, the lacking "reaction" of large German companies may also be due to the slow response of companies to changes in CSR reporting regulation (Pedersen *et al.*, 2013; Chauvey *et al.*, 2015). However, the increase in the German medium-sized and small segments (both in graph 2A and 2B) from 2008 to 2014 suggest that other factors than legislation seem to affect report quality across all segments.

In sum, within each country-subsample, the large companies reach higher average report quality than the medium-sized companies, followed by small companies. Under conditions of voluntary reporting in both countries (2008), absolute size seems to be a strong determinant of CSR report quality. In each country, larger

companies publish the highest quality reports, followed by medium-sized companies while small companies score the lowest. Comparing the scores of German and Danish reports indicates that size seems to also affect report quality in absolute terms: Within each segment, the German companies are larger than the Danish and score higher in the large and medium-sized segment. Yet, when comparing companies of comparable size across segments (Danish large and German medium-sized, Danish medium-sized and German small companies) the Danish companies score higher. Remarkably, in the small segment, average quality of German and Danish companies is quite similar despite the size difference. This indicates that under conditions of voluntary reporting relative size impacts the order of report quality across size segment within each country sample but absolute size seems to impact the order of report quality across firms of different size across countries. Yet, other country specific factors, such as culture seem to also affect CSR report quality. When Denmark introduced mandatory CSR reporting requirements, the means of German and Danish reports in the large and medium-sized segment became more similar in 2011 and 2014. Hence, legislation seems to have a moderating effect on differences in size of companies from different countries and/or differences in national culture or approaches to CSR. In 2017, when both countries had similar regulation, the average quality of the German and Danish companies are very similar in the three size segments. Hence, mandatory reporting seems to close the gap in CSR report quality caused by country of origin effects, such as differences in the absolute size of companies and culture or approaches to CSR reporting.

### 1.2. Sector affiliation

As described above, the literature has also pointed out that sector affiliation may affect CSR report quality. Graph 3 shows the mean Total quality score for German and Danish of the different sector.



It shows that there are differences in CSR report quality between German and Danish companies from the same sector. They are most visible in 2008-2014, while in 2017, when both countries have similar CSR reporting legislation, the differences are reduced significantly indicating a moderating effect of legislation on cross-country intra-sectoral differences.

German pharma companies published the highest quality reports of the whole sample in all years, except 2017. They are also on average the largest companies in the sample. In the Danish sub-sample, transport companies are the largest companies. Except in 2017, the sectors with the largest companies (German pharma and Danish transport) have the highest average quality in their country's sub-sample. The average quality score of the German companies in most years seems to reflect differences in the average size of the companies in each sector: In the German sample, pharma companies tend to be the largest, followed by transport companies, banks and lastly consumer companies (see Appendix 5). The same can be observed in the Danish sample in most years, where transport companies are the largest, followed by pharma companies, banks and consumer companies. Yet, in 2011 and 2014 Danish consumer companies reach a higher average report quality than the Danish banks despite being smaller. This indicates that the Danish banks seemingly reacted slower to the change in legislation in 2009 than the Danish companies in the other sectors.

Remarkably, the Danish transport companies have a higher mean in 2011 and 2014 than their German counterparts, despite being significantly smaller. The jump in the Danish transport companies' mean in 2011 by 18,4 points likely is a reaction to the change in Danish CSR reporting regulation. Thus, the transport companies show the strongest immediate reaction to the change in Danish legislation. Yet, also the Danish consumer companies show an increase of 16 points, despite being the smallest Danish companies in 2011. This means that Danish companies of all sizes and across all sectors responded to the change in CSR report legislation with an increase in report quality. Yet, Danish transport and consumer companies responded quicker and stronger than Danish banks.

In the German sample, the largest increases in overall quality are observed in the banking and consumer sector from 2008 to 2011 (around 12 points) and from 2014 to 2017 in the consumer and transport sector (16,7 and 14,2 points respectively). The jump in the German banks' mean in 2011 may be a reaction to the financial crisis (García-Benau, Sierra-Garcia and Zorio, 2013). By contrast, the Danish banks do show a jump in 2011. This may be explained by differences in the size and international activity by German and Danish banks. However, it would be beyond the scope of this paper to investigate this further.

The high scores of pharma and transport companies in both countries seem to contrast previous research on corporate visibility that found that B2C companies tend to score higher than B2B companies due to their closer proximity to market (Fifka, 2013; Hahn and Kühnen, 2013). Pharma and transport companies can be

categorised as B2B, while consumer products companies and banks tend to have a greater B2C aspect to their business. Thus, previous research encourages an expectation that banks, and consumer companies should score higher than pharma and transportation companies. Yet, in the sample at hand this clearly is not the case. However, as pointed out above the findings here may reflect the differences in size rather than the impact of sector affiliation, because in both country sub-samples, pharma and transport companies tend to be larger than banks and consumer companies. This difference is larger among the German companies (see Appendix 5). Previous research found that visibility seems to be positively associated with reporting extent and quality. Thus, the above findings seem to suggest that company size has a higher impact on corporate visibility than how close a company is to the end market. Yet, due to the small sample size and the significant size differences across sectors, further research would be needed to confirm this hypothesis.

In conclusion, average report quality increased over time in all sectors in both countries. The changes in the total quality mean per sector seem to reflect size differences of the companies of the different sectors. This is reflected in the high scores of pharma and transport companies in both countries. The difference between the sectors (difference between highest and lowest mean in each country) remains rather stable (15,7 points difference in 2008 and 18,6 in 2017) in the Danish sample. By contrast, in the German sample the difference almost halves from 37,2 in 2008 to 19 in 2017. This indicates that the change in legislation did not change inter-sectoral quality differences in the Danish sample. The difference peaked in 2011 at 29,6 after CSR reporting became mandatory and decreased to 21,3 in 2014, which may reflect sector specific differences in reaction time to the changed legislation. In both countries, transport and consumer companies showed the largest increase following the introduction of mandatory CSR regulation, despite significant difference in size. This may indicate sector-specific reaction to changes in CSR reporting legislation.

## 2. DISCLOSURE sub-score

The DISCLOSURE sub-score consists of several categories. Instead of presenting the results of the overall DISCLOSURE sub-score, this section addresses findings from four categories of the DISCLOSURE sub-score that were explicitly mentioned in the CSR reporting regulation: Environmental impact, Employee matters, Business Ethics and Human Rights.

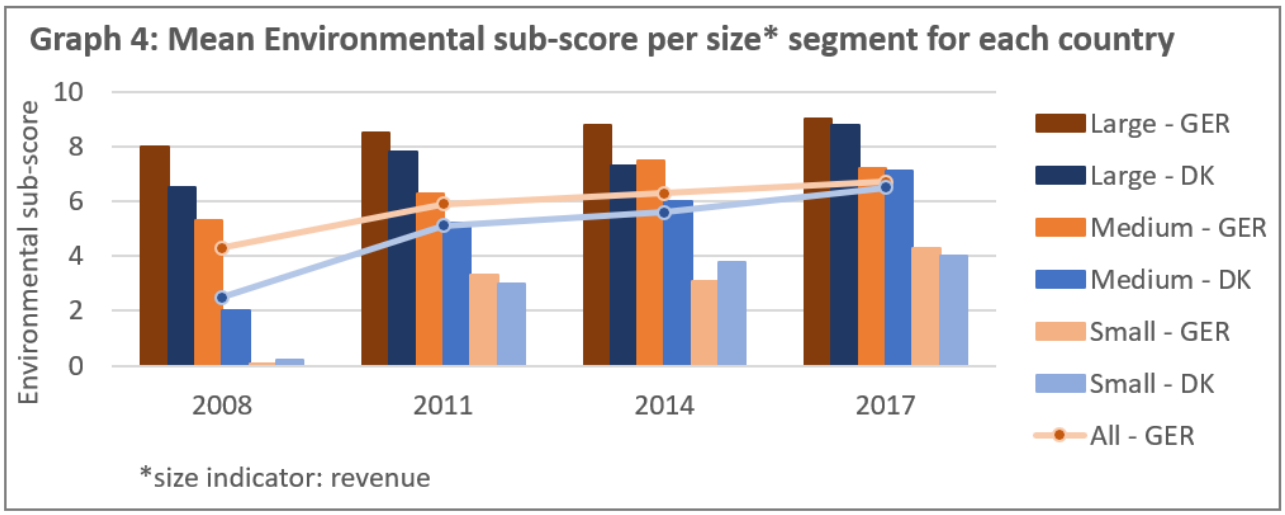
### 2.1. Environmental impact

According to the literature, environmentally sensitive sectors tend to report more extensively and probably in higher quality on environmental CSR efforts (Hahn and Kühnen, 2013). The pharma sector is an environmentally sensible industry (Cho and Patten, 2007). It is categorised by high levels of emissions (e.g. contaminated waste) and high resource consumption (e.g. water, electricity). The transport sector also generates high levels of emissions, mostly in form of CO2 and NOx and has a high energy and fuel

consumption. Banks by contrast have a comparatively low direct impact on the environment. Based on this, it may be expected that pharma and transport companies should score higher on the Environmental sub-score than banks.

The Environmental sub-score captures a company's reporting on its environmental input (e.g. resource consumption) and output (e.g. emissions). The maximum score is 11. Out of all 150 reports, 11 German reports reached the maximum score, but only one Danish report did. 28 reports scored 0, slightly more than half of those were German (15).

Graph 4 shows the mean Environmental sub-score for all size segments in both countries (bars) and the overall country averages (lines).

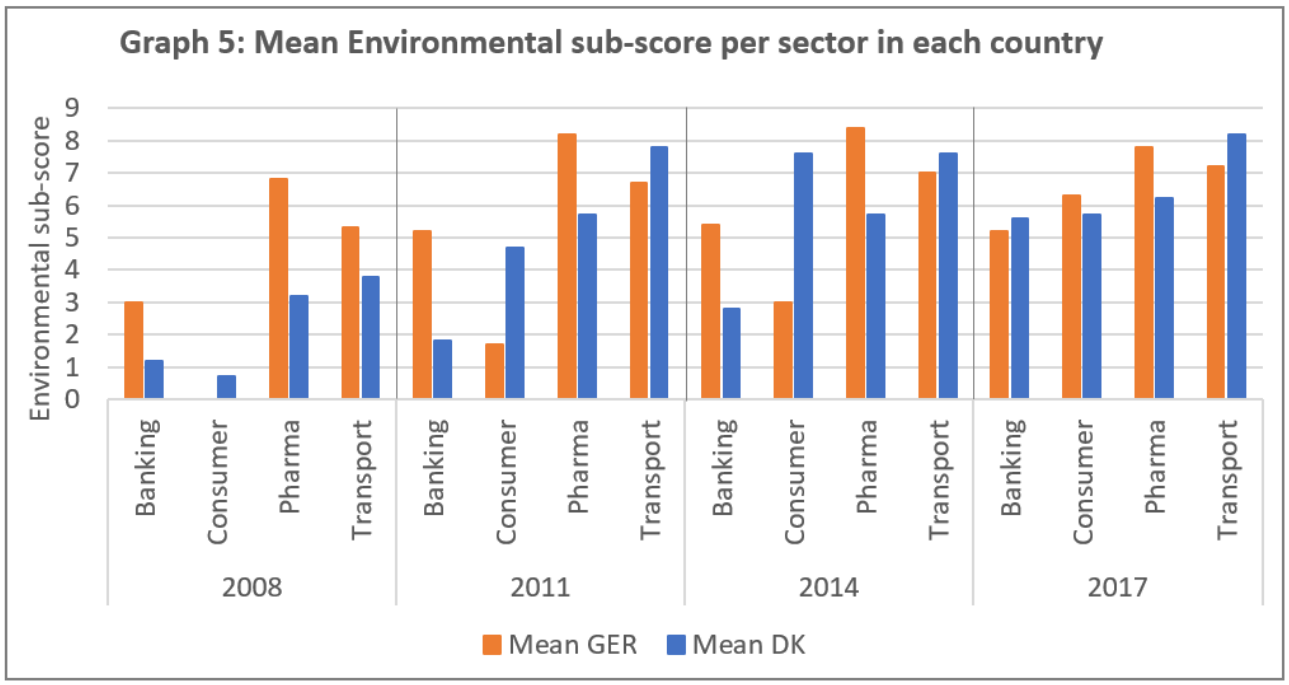



In both country sub-samples, the large companies have a higher mean than the medium-sized companies, which have a higher mean than the small companies. Thus, size seems to impact the Environmental sub-score. Furthermore, size seems to matter in absolute terms as the German companies score higher than their Danish counterparts, except in the small segment. This is in line with previous research that found that larger companies tend to disclose environmental matters more extensively (Hummel and Schlick, 2016). As observed for the Total quality score above, under conditions of voluntary reporting (2008), the German large and medium-sized companies score significantly higher than their Danish counterparts. The gap between German and Danish companies across all size segments is smallest in 2017 when both countries have similar legislation.

The means of all size segments tend to increase over time in both countries, which is reflected in the increase in both countries' overall mean. The increase in the Danish overall mean since 2011 seems to be a reaction to the change in Danish CSR reporting regulation that required companies to disclose environmental matters.

However, the German mean shows a quite similar development, which indicates that other factors may also have affected the increase in overall quality. As observed for the Total quality score above, the Danish companies seemingly reacted stronger to the change in legislation (increase of the means of all segments in 2011) than the German companies (almost no change from 2014 to 2017). However, as noted above this may be due to the short reaction time for German companies to the legislative change in 2017.

Graph 5 shows the Environmental sub-score means of all sectors in both countries over time.




In both countries, the environmentally sensitive sectors, pharma and transport have the highest means in all years. This may seem to support the findings of previous research that sector affiliation impacts environmental reporting. However, these results may also reflect size differences in the companies in the different sectors. In the German sample, the order from 2008 to 2014 reflects the relative size of the companies in the sectors: pharma companies are on average the largest, followed by transport companies, banks and consumer companies. The same is observed in the Danish sample, where the highest scoring transport companies are the largest, followed by pharma companies, banks and consumer companies. Thus, the higher scores of pharma and transport companies may be explained by their larger size or by their affiliation with an environmentally sensitive sector or by a combination of the two factors. However, the observations here seem to indicate that size has a stronger effect than sector affiliation, because in both country sub-samples the environmentally-sensitive sector with the larger companies has the higher average quality (pharma companies in the German sample and transport companies in the Danish sample).

The higher mean of German pharma companies than their Danish counterparts may be explained by their larger size. Yet, remarkably, the reports of Danish transport companies' have a higher average quality than their German counterparts (from 2011 onwards), despite being smaller. This may reflect a country of origin effect consisting of a combination of factors such as the Danish legislation, potentially enhanced media coverage since some of the Danish transport sample companies are national champions[7] and potentially isomorphic pressures among competitors.

The German banks' mean jumps from 2008 to 2011 and then stagnates, while the Danish banks' mean shows the largest jump from 2014 to 2017. This sluggish increase of the Danish banks' mean may either be interpreted as a slow reaction to the change of legislation or may indicate that the disclosure of environmental information has become more important in general. Many of the large German banks' reports cover how their investment projects affect the environment though the funding of green projects.[8] This may indicate that larger banks with global operations are exposed to greater expectations to include environmental information in their CSR reports, hence the higher mean of the German banks.

In sum, these findings suggest that affiliation with an environmentally sensitive sector tends to be accompanied by more extensive environmental reporting. However, size seems to have a strong impact as well and similar legislation reduces differences in average quality between German and Danish companies of the same sector.

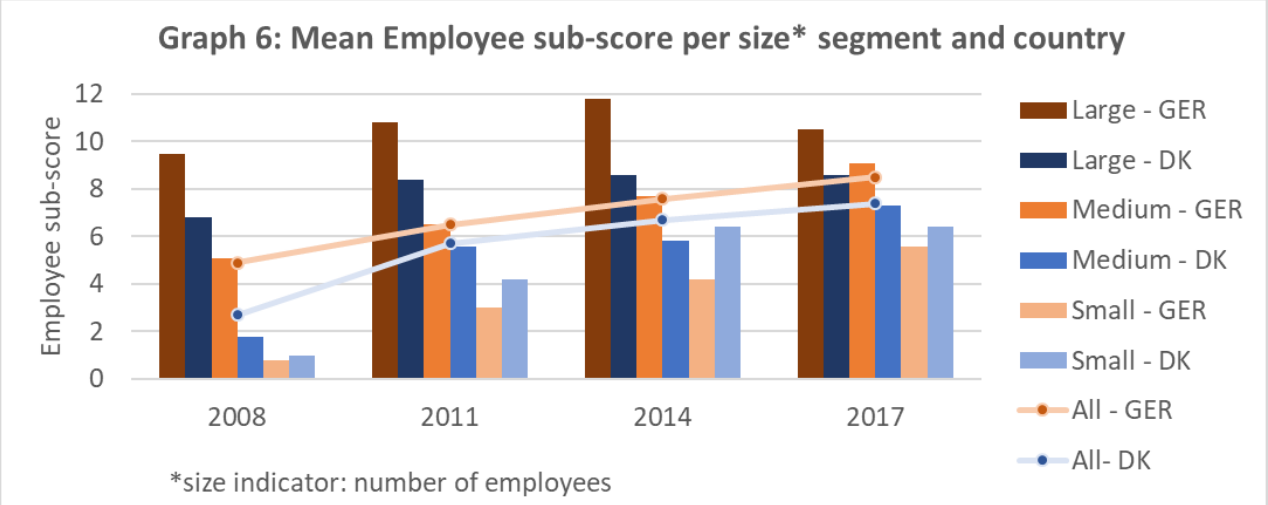
## 2.2. Employee matters

While the previous section found that size seems to impact the total quality score, it is worth examining whether there is any indication that size, measured in number of employees may have a particular effect on how high a company scores on the Employee sub-score. Based on signalling theory, one may assume that companies with many employees might report in higher quality about their CSR efforts concerning employee welfare, diversity, etc. as captured in the EMPLOYEE sub-score to signal positive social performance to their stakeholders. Drawing on legitimacy theory one could argue that companies with a large workforce may score higher on the Employee sub-score as they may want to assure their stakeholders that they treat their employees right as the basis for their licence to operate.

The Employee sub-score captures how detailed companies report on i.a. health and safety measures, lost days due to accidents or work-related illness, but also employee-management relations, benefits and

[7] Mærsk's reports from 2011 and 2014 contain replies to media accusations of negative environmental impact.
[8] Deutsche Bank 2011, 2014, Commerzbank 2011, 2017. Even though this was not coded in the Environmental sub-score, it indicates an increased environmental awareness among the German banks.

diversity/equality in employment and promotion. Graph 6 shows the average Employee sub-score of all segments in both countries (bars) and the overall country means (lines).



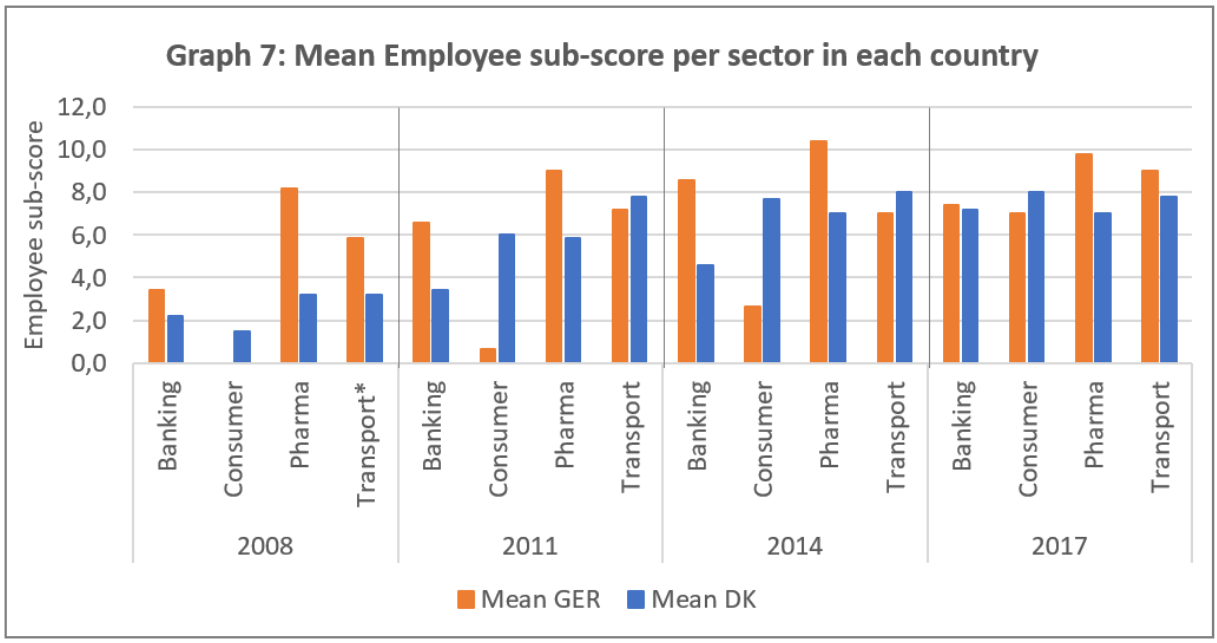

The maximum possible score in the Employee sub-score is 21. Most German companies tend to score at 8 or higher, while most Danish companies score below 8. This is reflected in the overall mean, which is higher for the German companies in all years. The large and medium-sized German companies score significantly higher than their Danish counterparts, while the small Danish companies score higher than the small German companies. As argued above, this indicates a country of origin effect beyond firm size and legislation.

Employee welfare was explicitly introduced as a mandatory reporting category with the transposition of the EU non-financial reporting directive into national legislation in Denmark in 2016, in Germany in 2017. However, already since 2009 the Danish law required reporting on the company's social impact. Probably as a consequence, no Danish report scored 0 since 2011. Additionally, the mean of Danish companies across all size segments jumps up from 2008 to 2011, which indicates a reaction to the new legislation. Remarkably, the mean of the large German companies drops from 2014 to 2017. Yet, in 2017, perhaps in reaction to the new laws, no German company scored 0 anymore.

In sum, German companies report in greater extent about employee matters than Danish companies, which may be explained by the size difference between German and Danish companies. However, when comparing companies of similar size (German medium-sized and Danish large, German small and Danish medium-sized), Danish companies report in greater detail than German companies both under conditions of voluntary reporting (2008) and mandatory reporting (2011-2014). However, when Germany introduced mandatory reporting as well in 2017, the medium-sized German companies score higher than the large Danish companies. Independent of the legal situation, small Danish companies always score higher than small

German companies despite being significantly smaller. This indicates a country-of-origin effect beyond legislation, e.g. cultural differences.

Graph 7 shows the mean Employee sub-score for Danish and German companies across the different sectors.




German pharma companies report in greatest detail on Employee matters in all years. In the Danish sample, transport companies have the highest average report quality, followed by pharma in 2008 and consumer companies from 2011 onwards. Similar to above, in the German sample, the average Employee score seems to reflect size differences of the companies of the different sectors. In 2017, however, the German consumer companies' mean jumps up to about the same level of the German banks, even though the average size of their respective workforce remains stable. This is likely a reaction to the change in German CSR reporting law. The drop in the German pharma companies mean in 2017 is puzzling but can be explained by an individual drop in one company's score that strongly affects the mean given the small sample size.

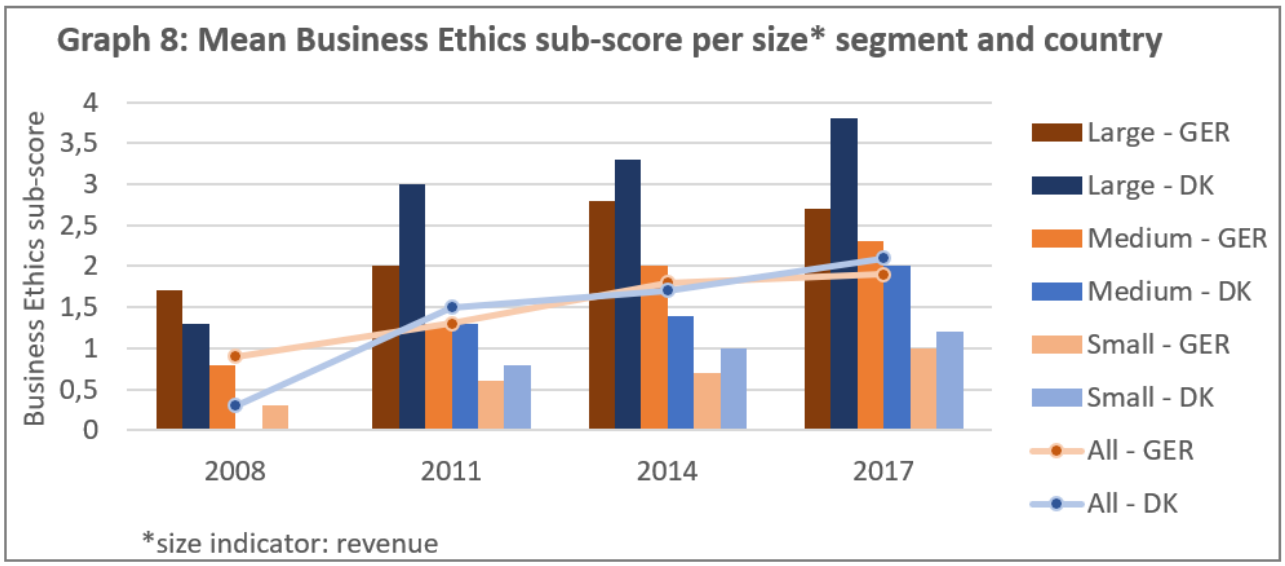
Also, in the Danish sample, the average Employee score seems to mirror size differences in the workforce of companies in the different sectors. However, in 2017, the much smaller Danish consumer companies show a higher mean Employee score than the Danish transport companies, which are the largest Danish companies. This may be due to the small sample size in which the high score of one Danish consumer company has a strong impact on the Danish consumer companies' mean. Yet, the mean Employee scores of consumer companies in both countries rise significantly and jumps occur in both countries following a change in legislation. Drawing on previous research on company visibility of B2C companies (Fifka, 2013), this may

indicate that the introduction of reporting requirements on employee matters may have increased media scrutiny on consumer companies to report on how they treat their workforce.

### 2.3. Business Ethics

The Business Ethics sub-score captures a company's reporting on corruption and bribery, e.g. on business ethics policies, training the workforce, incidents of corruption or bribery, describing a whistleblowing system etc. The maximum score is 5, which is only reached by one large Danish pharma company in 2011 to 2017.

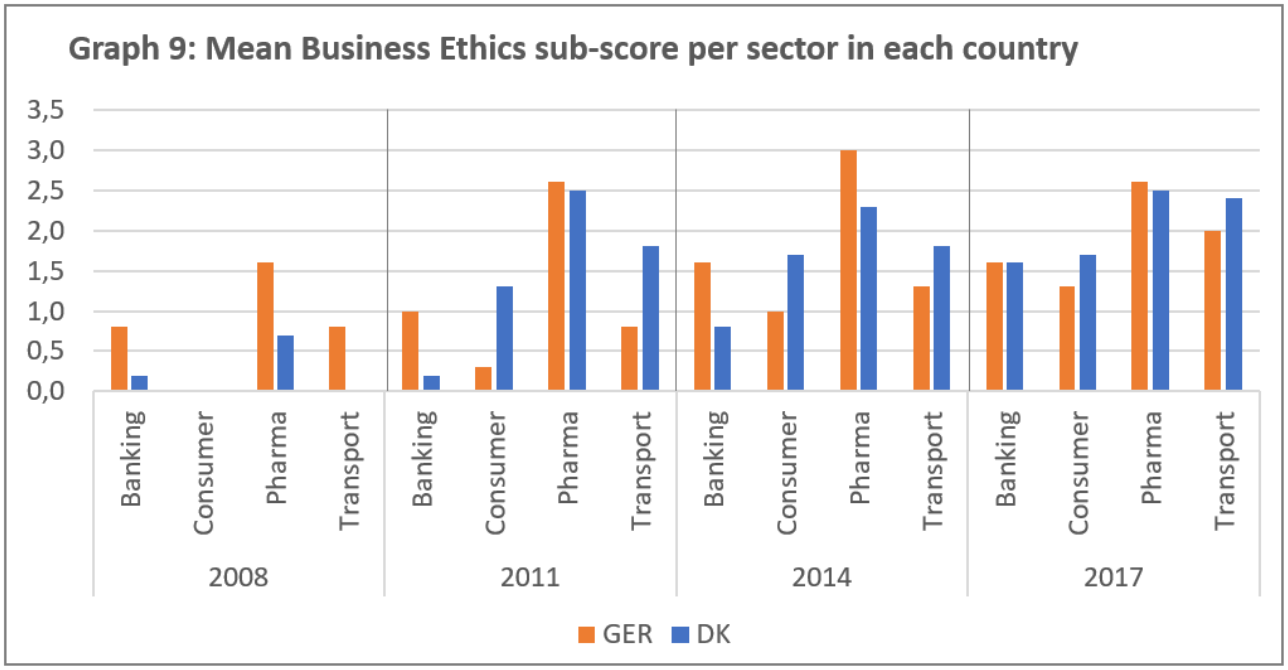
Graph 8 shows the development of the Business Ethics sub-score mean over time for all segments in both countries (bars) and the overall country mean (lines).




In most years, the average Business Ethics score seems to reflect size differences between German and Danish companies of the same size segment. Yet, remarkably, the Danish large companies score by far highest since 2011. Reporting on corruption matters became mandatory in Denmark in 2009, which likely induced the increase across all size segments and drove up the overall Danish mean by 1,3 points from 2008 to 2011. Also, the number of Danish reports that scored 0 shrank drastically from 16 in 2008 to only 5 in 2011. It further dropped to 3 in 2014 and 0 in 2017. Simultaneously, the number of Danish reports that scored 3 or higher increased from only 1 in 2008 to 4 in 2011 and 2014, and 7 in 2017. When similar reporting requirements were introduced by German law in 2017, no comparable jump of means across all size segments is observable. Yet, this may be a consequence of the difference in time horizons and companies' reaction time. Also, the number of German reports that score 0 incrementally dropped from 8 in 2008 to 2 in 2017, accompanied by an incremental increase in reports that score 3 or more from 1 in 2008 to 5 in 2017. This indicates that factors other than size and legislation seem to impact reporting on Business Ethics. This is also reflected in the close development of the German and Danish overall means.

The Business Ethics sub-score is one of few sub-score where large Danish companies repeatedly show the highest mean in the sample. Furthermore, as observed for other sub-scores, also in the Business Ethics sub-score, small Danish companies tend to score higher than small German companies. This indicates another country-of-origin effect beyond legislation.

Graph 9 shows the mean Business Ethics score for the different sectors.



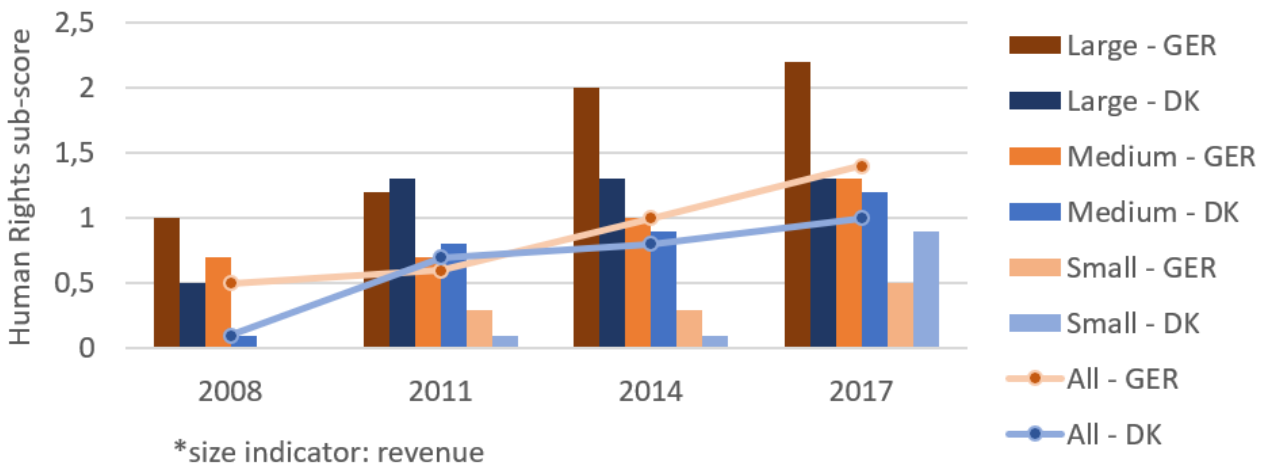

In both country samples, pharma companies have the highest average score, followed by the transport sector (except in 2008, where Danish banks score higher). The mean of the Danish companies increases from 2008 to 2011 across all sectors, which indicates that companies in all sectors responded to the change in legislation. Yet, the Danish banks' mean increases only in 2011 and 2017, which supports the findings from above that Danish banks seems to respond slower to the change in legislation than companies of the other sectors. Comparing the Danish pharma and transport sectors indicates that in the Business Ethics score, sector-affiliation may be more important than relative size, as the Danish transport companies score lower than the Danish pharma companies despite being larger. The same may be concluded when comparing the Danish banking and consumer sectors: consumer companies score higher than banks in 2011-2017, despite being much smaller. As also observed for other sub-scores, the Danish consumer companies reach a significantly higher score than their German counterparts in 2011 and 2014 (despite being smaller), when Danish companies were legally obliged to report, while German companies were not. By contrast, in the German sample, the average Business Ethics scores seem to reflect size differences across companies in the various sectors.

In sum, in 2008, the German companies of all size segments and across all sectors scored higher than their Danish counterparts, which indicates that in the absence of mandatory reporting laws in both countries (2008), larger companies tend to report more extensively on business ethics. In 2011 and 2014, when legal conditions differ between Denmark and Germany, the results are mixed. Danish transport and consumer companies score higher than their German counterparts, while Danish pharma companies reach about the same mean as their German counterparts. Danish banks seem to respond slower to the mandatory reporting rules than the other sectors. Thus, in the transport and consumer sector, companies seem to report in higher quality on business ethics topics when obliged by law, and size seems to matter less. In 2017, when similar laws applied in both countries, the means are quite similar across all sectors. Hence, for the Business Ethics category, mandatory reporting seems to increase overall report quality by lifting both the quality floor and ceiling, which is i.a. reflected in a reduction of reports scoring 0 from 21 in 2008 to 2 in 2017 and an increase of reports scoring 3 or higher from 2 in 2008 to 12 in 2017. While the scores in the German sample seem to be influenced by size differences across the sectors, by contrast the observations in the Danish sample suggest that sector affiliation rather than size seems to impact the reporting on Business Ethics.

### 2.4. Human Rights

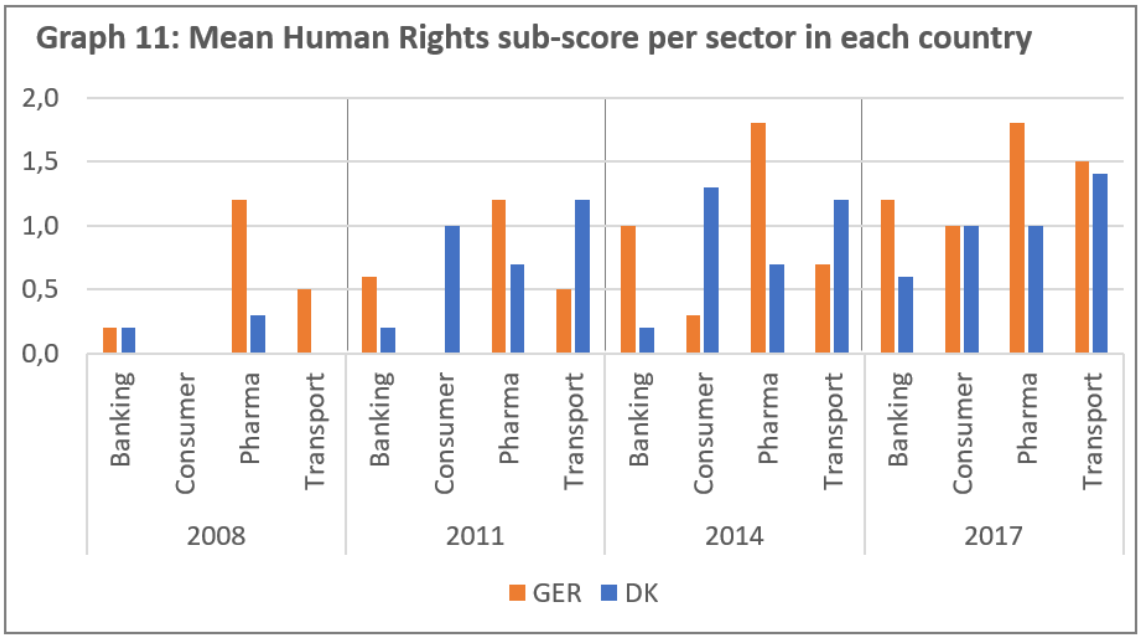
The Human Rights sub-score captures a company's reporting on human rights related topics, such as company policies on forced labour or child labour, training the workforce in human rights, reporting incidents of human rights violations, etc. The maximum score is 5. The highest score in the sample was 3, which was only reached by four reports in total (two large German pharma companies in 2014, a large German bank and a large German pharma company in 2017). In 2008, 24 reports scored 0. This number decreased to 16 in 2011, 14 in 2014 and 4 in 2017. Graph 10 shows the mean Human Rights scores sub-score for all size segments in both countries (bars) and the overall country averages (lines).

**Graph 10: Mean Human Rights sub-score per size* segment and country**



In most years, German companies tend to score higher than Danish companies. Remarkably, in 2011, the Danish large and medium-sized companies score higher than their German counterparts. The largest jumps (both by 0,8 points) are observed in the large segment, for Danish companies in 2011 and German companies in 2014. The means of all Danish size segments increase from 2008 to 2011, which indicates a reaction to the changes in CSR reporting legislation making reporting on Human Rights issues mandatory in 2009. The small Danish companies seem to react rather slow as their score jumps the most in 2017. The jump of the large German companies from 2011 to 2014 indicates that other factors besides legislation seem to impact their reporting on human rights. Furthermore, there is no significant jump observable in the German sample from 2014 to 2017 that differs from the trend of the previous years and would indicate a reaction to the mandatory reporting rules. Mainly driven by the high mean of the large German companies, the overall mean tends to be higher for German companies than for Danish companies, yet, they are quite low given the maximum score of 5.

Graph 11 shows the mean Human Rights sub-score of the different sectors in both countries. German pharma companies have the highest average score each year. In 2008, when neither country had CSR reporting legislation, all means, except that of German pharma companies, were below or at 0,5. All Consumer companies and Danish Transport companies had a mean of 0. While in the German sample, only the banks' mean increases from 2008 to 2011, in the Danish sample, all sectors' means increase, except for the banks', which increases significantly in 2017. This supports the conclusions drawn above that Danish banks seem to react slower to the change in legislation than the other Danish companies. German consumer and transport companies seem to respond to the change in legislation as their means increase more from 2014 to 2017 as in previous years.



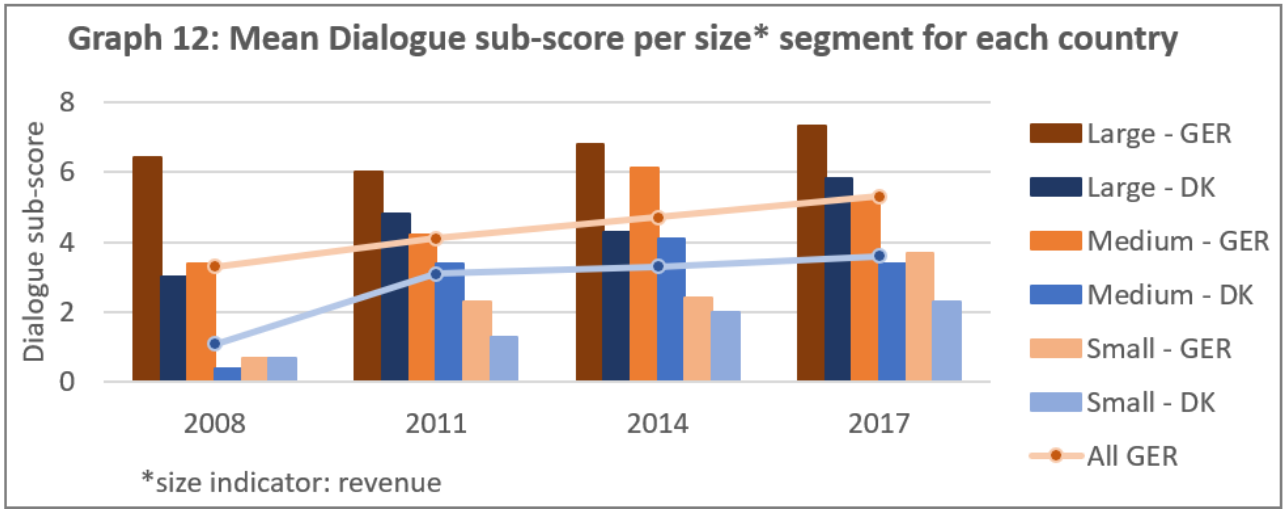
As observed for all other sub-scores, the means increased across all sectors and in all size segments over time. Under conditions of voluntary reporting (2011 and 2014), German pharma companies and banks have a higher mean than their Danish counterparts under mandatory reporting. As for the Business Ethics sub-score, in 2011 and 2014, Danish consumer and transport companies score higher than their German counterparts, which reach a very similar mean in 2017. This may indicate that the consumer and transports sectors seem more responsive to changes in CSR reporting legislation regarding Human Rights than the banking and pharma sectors and report in higher quality on their human rights impact under conditions of mandatory reporting. The significantly higher scores of German pharma companies and banks point to a country of origin effect beyond legislation or different factors affecting reporting on human rights issues other than company size.

## 3. Other sub-scores: DIALOGUE, DEVELOPMENT, CREDIBILITY

In contrast to the categories of the DISCLOSURE sub-score addressed above none of the components of the other three sub-scores were explicitly covered by the mandatory CSR reporting regulation introduced either in Denmark or Germany. In the following, findings from the three remaining sub-scores are analysed and discussed.

### 3.1. DIALOGUE sub-score

The DIALOGUE sub-score captures a company's stakeholder engagement, e.g. how detailed a company addresses and describes its stakeholders and the communication processes for stakeholder involvement. The maximum possible score is 15. The highest score in the sample is 11, reached by a medium-sized German pharma company in 2014. Among the 14 highest scoring reports (with a score of 8 or higher), only four are issued by Danish companies. 32 reports score 0, of these 18 are Danish. Graph 12 shows the average dialogue sub-score for all size segments in both countries (bars), and the overall country averages (lines).

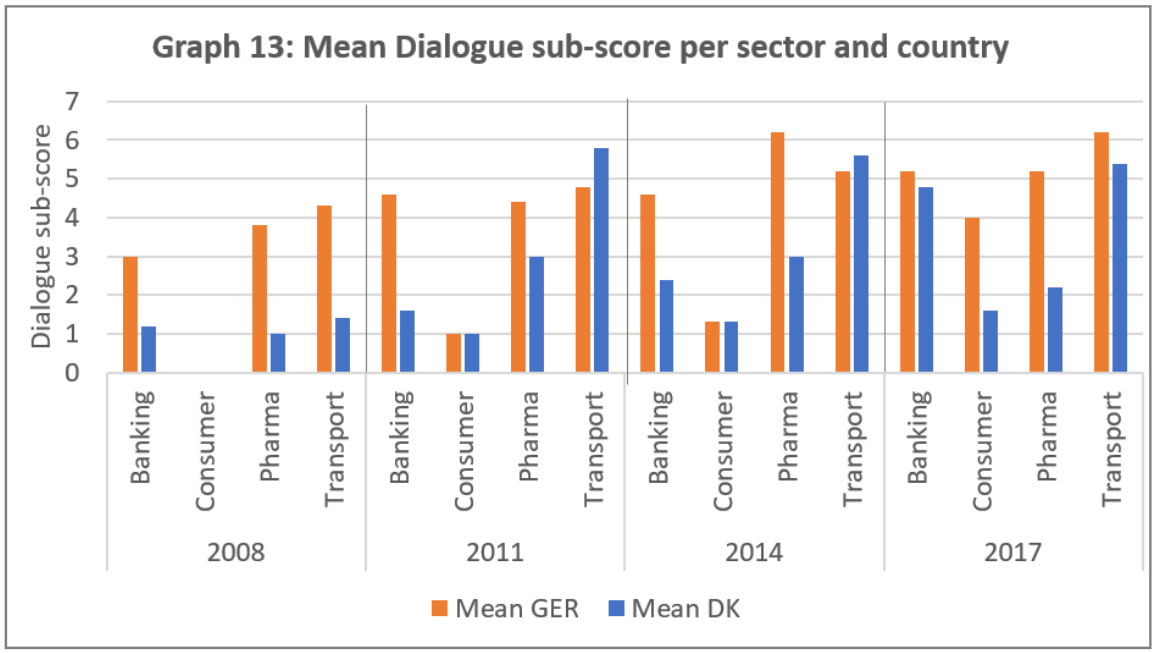


The large German companies score highest in all years. Generally, German companies tend to score higher than their Danish counterparts, except in the small segment in 2008, where scores are identical. This indicates that absolute size impacts the DIALOGUE sub-score. The overall German mean is significantly higher than the overall Danish mean, which can be explained by the difference in size of the German and Danish companies or may point to a country of origin effect other than legislation.

The Danish large and medium-sized companies' means show the largest jump from 2008 to 2011, which indicates a reaction to the change in CSR reporting laws, even though stakeholder dialogue was not an explicit part of the mandatory reporting requirements. The German companies means in all size segments tend to increase over time and there is no comparable jump from 2014 to 2017 that would indicate a deviation from the previous years' trend in reaction to the change in German CSR reporting legislation in 2017. However, this may reflect companies' lagging response to legislative changes.

In sum, these findings indicate that size affects how a company reports on its stakeholder engagement and communication processes. The larger a company, the more detailed it seems to report on these matters. Furthermore, the high scores of German companies in the large and medium-size segment (particularly in 2008 and 2011) may indicate a country of origin effect.

Graph 13 shows the mean DIALOGUE score for the different sectors.



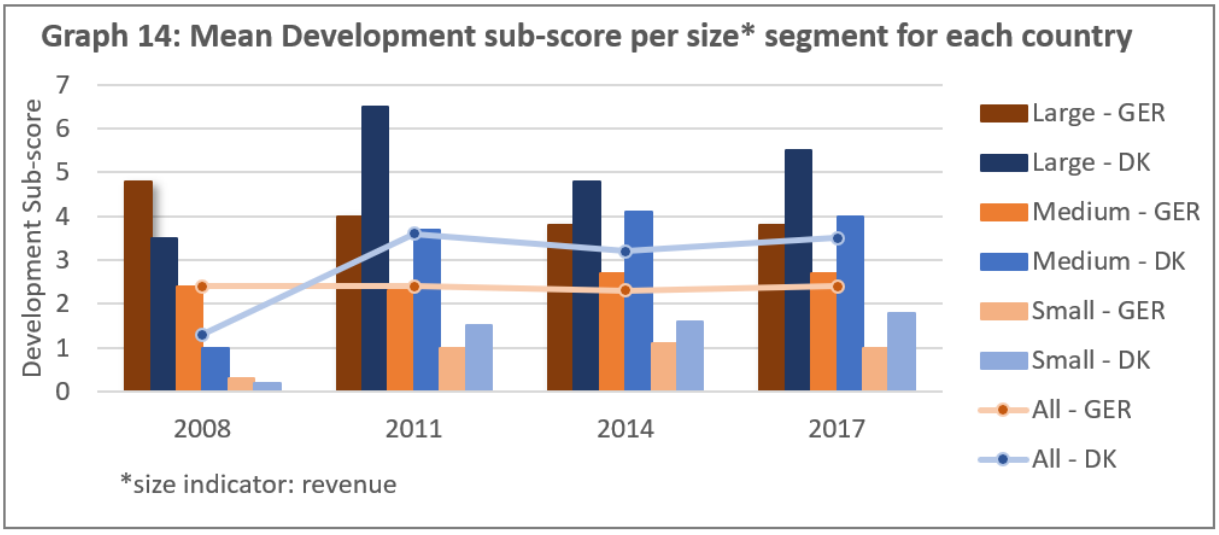

Transport companies have the highest mean in the Danish sample in all years. Also, in the German sample, transport companies score highest in all years, except 2014, where pharma companies took over. This indicates that differences in size between the companies in the various sectors seems to affect the

observations. The averages of Danish pharma and transport companies jump up in 2011 indicating a reaction to the change in legislation even though stakeholder engagement was not a mandatory reporting category. As observed before, the Danish banks were slowest to respond. Their score only jumps up in 2017. Unlike the observation above, the DIALOGUE scores of Danish and German firms do not converge as much in 2017 under similar reporting requirements. Under institutional theory, this is not surprising as reporting on stakeholder engagement was not an explicit requirement under the law.

### 3.2. DEVELOPMENT sub-score

The DEVELOPMENT sub-score captures the extent to which a CSR report is forward-oriented, shows indications of a long-term CSR commitment and strategy as well as critical reflections on CSR efforts and learning from stakeholder dialogue. The maximum possible score is 12. The highest score in the sample was 8, reached by two large Danish companies. Of 150 reports, 37 scored 0, 22 of these were from German companies. 15 reports scored 6 or higher, 12 of these were from Danish companies.

Graph 14 shows the mean DEVELOPMENT sub-score for companies of all size segments in both countries (bars) and the overall country means (lines).




In 2008, when neither country had specific CSR reporting legislation in place, the German companies scored higher than the Danish, from 2011 to 2017 the situation is reversed as reflected in the overall means. In 2008, the DEVELOPMENT scores seem to reflect size differences across German and Danish companies of the same size segment. However, from 2011 to 2017 under conditions of mandatory reporting in Denmark, Danish companies score higher than their German counterparts across all size segments. Thus, mandatory reporting requirements seemingly had a reversing effect on the size differences between German and Danish companies. The DEVELOPMENT score is the only sub-score where Danish companies of all size segment score

higher than their German counterparts in all years after Denmark introduced mandatory CSR reporting (2011-2017). This indicates a strong country-of-origin effect, which at least partially seems to be related to legislation.

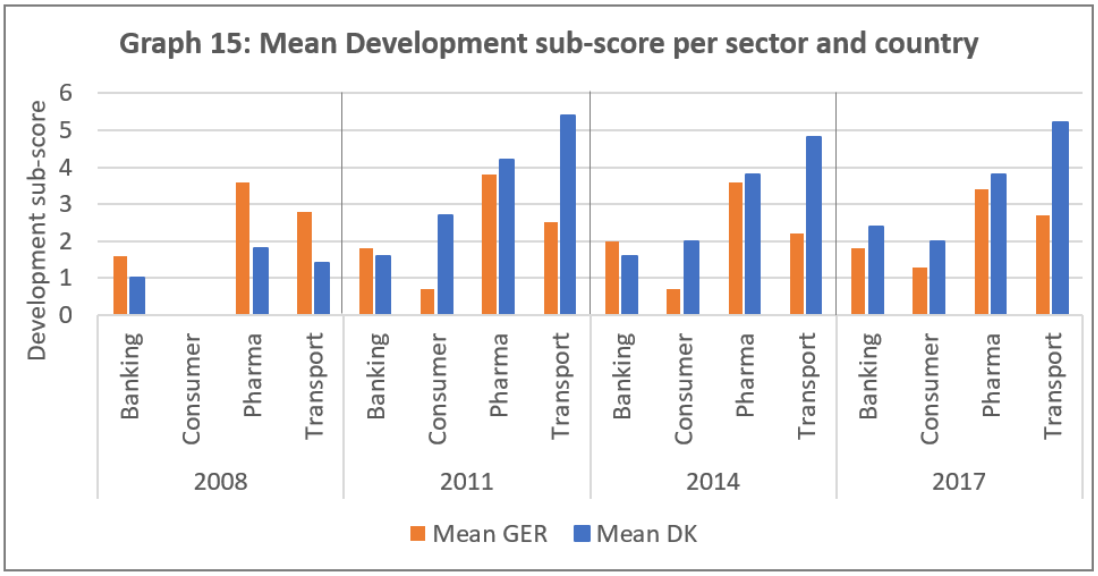
The significant increase in the Danish companies' scores of all size segments from 2008 to 2011 indicates an effect of the change in legislation even though none of the DEVELOPMENT categories were explicitly mentioned in the law. Yet, the increases in the DEVELOPMENT (and also the DIALOGUE sub-score) may be driven by a "side-effect" of the change in Danish CSR legislation: While only three Danish companies were participating in the UNGC (United Nations Global Compact) before 2009, 8 Danish companies joined the UNGC between 2009 and 2011. This indicates that mandatory reporting requirements encouraged Danish companies to join the UNGC. As showed in greater detail below, many Danish companies consequently changed from reporting on CSR as a part of their annual report (or not publishing any relevant information) to publishing separate CSR reports, many of which were COP reports (UNGC Communication on Progress). This likely also contributed to the increase in the DISCLOSURE sub-score as the 10 principles of the UNGC require companies to report on their progress regarding human rights, labour, environment and anti-corruption. Further, the COP minimum reporting requirements request a statement by the CEO on continued support (UNGC, 2013). The change of reporting format also seems to have encouraged these Danish companies to report in greater detail, to address their stakeholders (which improved their DIALOGUE sub-score as observed above) and include reflections on their progress, which drove up the DEVELOPMENT sub-score as observed here. Primarily large and medium-sized companies joined the UNGC which may explain the comparatively low score of the small Danish companies.

For the German companies, no comparable increase is observed in 2017 following the introduction of mandatory CSR reporting requirements. Also, all 11 German UNGC participants in the sample had joined by 2012, many of these companies had joined before the first observation year for this study (8 German companies joined the UNGC between 2000 and 2006). Thus, no German company seemed to have joined the UNGC in 2017 to comply with the CSR reporting requirements. The overall lower level of German companies in the large and medium-sized segment suggests that report quality may differ depending on whether a company joins the UNGC voluntarily (the German companies) or to comply with national legislation (the Danish companies). Perez-Batres et al (2011) found that mimetic pressures (i.e. peer influence) are a better indicator for why companies join the UNGC than coercive pressures from legislation. The patterns observed here seem to run counter to their observations, however, the small sample size at hand does not allow for a strong conclusion. Furthermore, Perez-Batres et al' work aimed at understanding patterns of companies joining the UNGC not what potential effect this may have on the quality of the COP reports. Therefore, further

research may be needed to understand the motivations of German and Danish companies for joining the UNGC and a potential effect of these motivations on CSR report quality.

In conclusion, the introduction of mandatory CSR reporting in Denmark seems to have reversed the effect of size differences of German and Danish companies on how companies report on their CSR strategies, reflect on their CSR efforts and learning from stakeholder engagement. Furthermore, CSR reporting legislation seems to have encouraged better reporting on these parameters in Denmark, but not in Germany.

Graph 15 shows the mean DEVELOPMENT sub-score for the companies in each country per sector.




In the German sample, the order is the same of all years: Pharma companies score highest followed by transport companies, then banks and lastly consumer companies with very small changes (>0,5 points) from year to year. This indicates that differences in size of the companies of the different sectors affects the German scores. In the Danish sample, this not as much the case. The Danish sector with the largest companies is the transport sector, which scores highest in 2011 to 2017, followed by pharma companies, which are second largest in the Danish sample. The Danish banks score higher than the consumer companies in 2008, where they are larger, but also in 2017, where consumer companies have grown larger than the banks in the Danish sample. This indicates that differences in the DEVELOPMENT score are not merely reflection of differences in size.

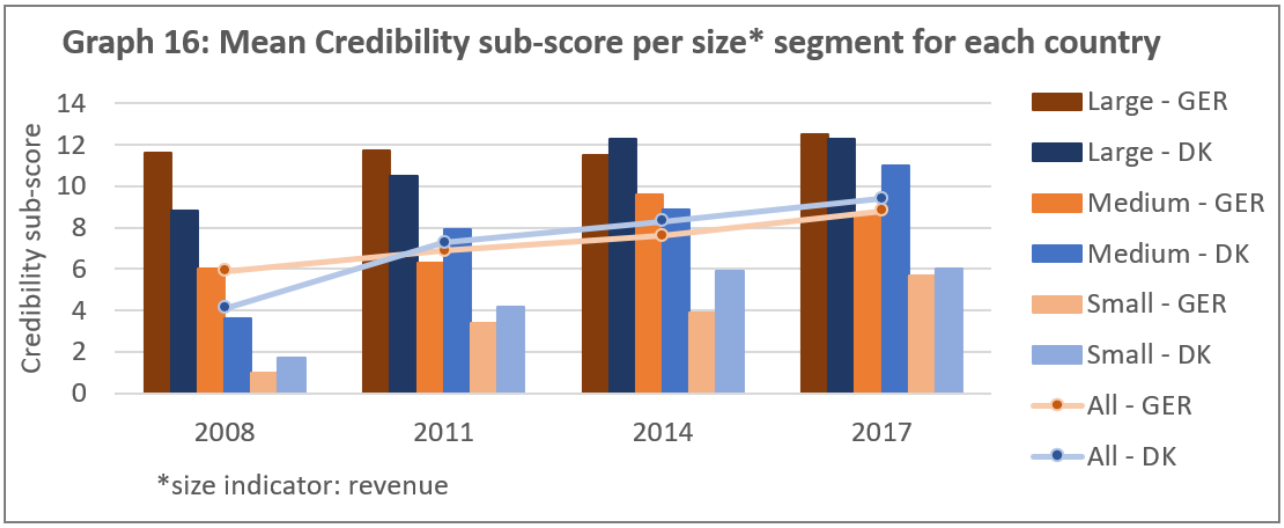
Under conditions of voluntary reporting in both countries (2008), the German pharma companies score highest, while Danish transport companies reach the highest score each year after CSR reporting became mandatory in Denmark (2011-2017). This indicates that there are differences between German and Danish companies in the same sector. Under similar legal requirements in both countries in 2017, these cross-

country intra-sectoral differences are reduced, but still prevail to a certain extent indicating a country of origin effect as well as the impact of size differences between the German and Danish firms belonging to the same sector.

### 3.3. CREDIBILITY sub-score

The CREDIBILITY sub-score measures the overall credibility of a CSR report through the categories accuracy, balance, clarity, comparability, timeliness and reliability (external assurance). The maximum possible score is 16. Out of 150 reports, 10 score 15. 64 reports score at least 10, and 15 score 0 (10 of these are German reports).

Graph 16 shows the mean CREDIBILITY sub-score for all size segments in both countries (bars) and the overall country averages (lines).



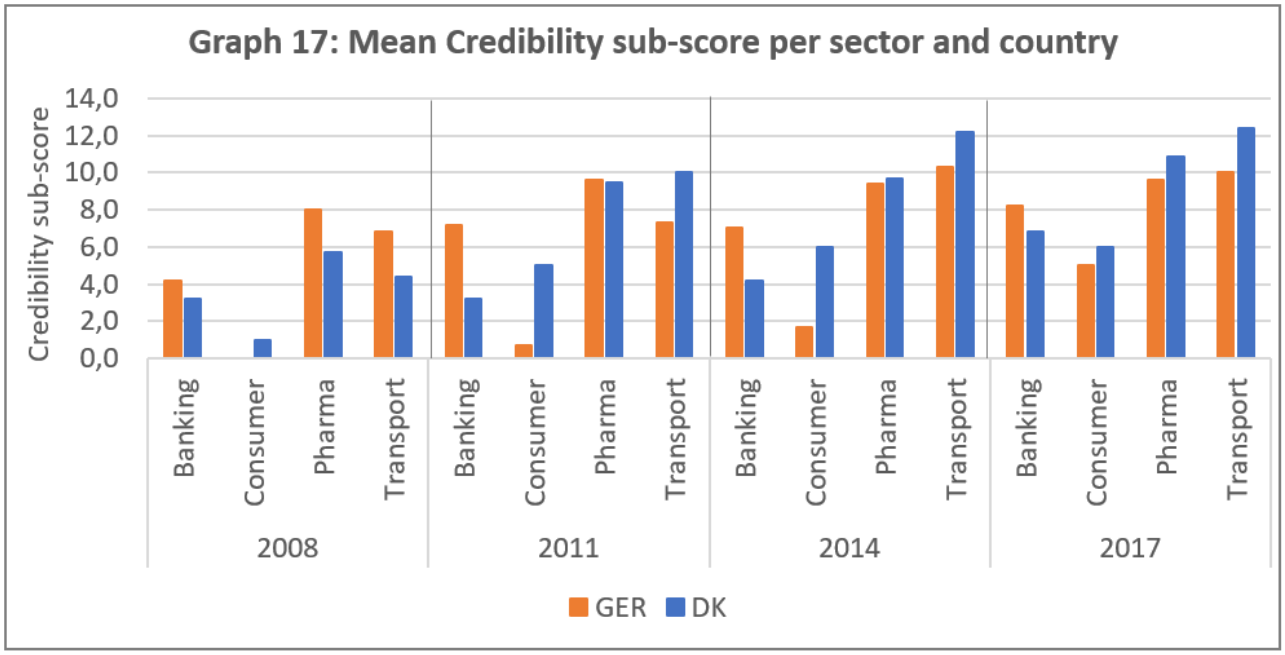

Size seems to affect the CREDIBILITY score, because for each country, the large companies have a higher mean than the medium-sized companies, which have a higher mean than the small companies. Under conditions of voluntary reporting in both countries in 2008, absolute size differences seem to impact the CREDIBILITY score, while following 2011, Danish companies tend to score higher in most size segments. As concluded for the DEVELOPMENT score, this indicates that mandatory reporting in Denmark seems to have reversed the effect of size as Danish companies tend to score higher than German companies since 2011 across all size segments. The observation that larger companies tend to issue more credible reports contrasts Lock and Seele (2016), who found that size only has a positive effect on the likelihood to publish CSR information, but not on report quality. The small sample size here does not allow for strong conclusions. However, contrasting findings may also be explained by the differences in the evaluation frameworks.

In 2011, the Danish mean jumps by 3,2 points and remains slightly above the German overall mean until 2017. This jump in the Danish mean may be a reaction to the mandatory CSR reporting regulation. Even though the law did not make any specifications regarding the categories covered in the CREDIBILITY score, it is argued as above that the change in regulation may have increased the membership of Danish companies in the UNGC which seems to have affected the companies' choice of reporting format, which seemingly had an overall positive effect on all four dimensions of the total quality score applied here.

By contrast, there is no comparable visual indication that the change in German legislation in 2017 positively impacted the CREDIBILITY score of German companies as strongly as a comparable change in 2009 seemingly affected the Danish companies. The small German companies' mean had been increasing for all previous years, the mean of the medium-sized German companies decreases, the large German companies' mean increases by one point, which is a larger increase than for all previous years. The overall German mean continues to increase by about the same magnitude as it did in previous years.

In conclusion, the introduction of mandatory CSR reporting in Denmark seems to have moderated or even reversed the effect of size differences between German and Danish companies. Furthermore, CSR reporting legislation seemingly pushed to increase the average credibility of Danish reports, but no comparable increase was observed in the German sample. Yet, the similar development of the overall mean in both countries in 2011 and 2014 under conditions of voluntary reporting in Germany and mandatory reporting in Denmark indicates that other factors also seem to impact CSR report credibility.

Graph 17 shows the CREDIBILITY score mean of German and Danish companies for all sectors.



Remarkably, despite the large size difference between German and Danish pharma companies, the means of the pharma companies from both countries are quite close since 2011. In line with the findings above, the Danish companies tend to score higher across all sectors except banking starting under conditions of mandatory reporting (2011-2017). The biggest difference between German and Danish companies is observed in 2011 and 2014 in the banking and consumer sectors, where German banks and Danish consumer companies score higher than their respective counterparts. Yet, also Danish transport companies score significantly higher than their German counterparts since 2011, despite being much smaller. Previous research has pointed to the loss of trust following the financial crisis as a potential factor for large banks to increase their CSR reporting (Jizi *et al.*, 2014). The German banks in the sample are larger than the Danish ones, which may contribute to explaining the jump in the German banks' mean from 2008 to 2011.

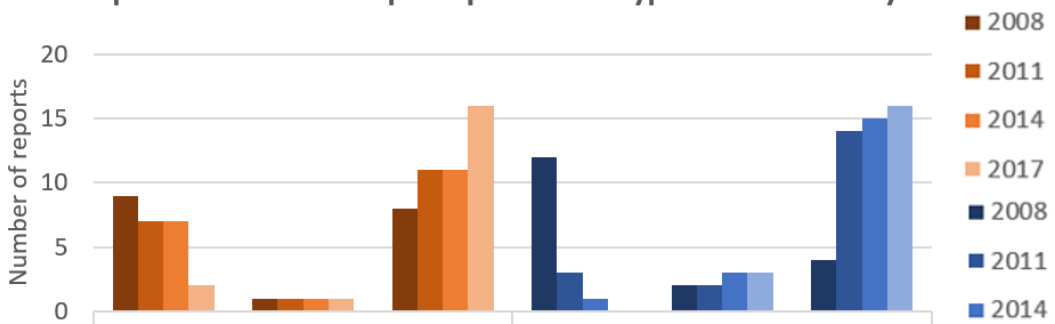
The order in the German sample is similar to the Development sub-score and depicts the order of the relative size of the companies per sector: pharma companies, the on average largest companies in the German sample, have the highest mean, followed by transport, the second largest companies, then banks and lastly consumer companies, the smallest companies in the German sample. In the Danish sample, the pharma sector has the highest mean in 2008, but for all other years, transport companies (the largest companies in the Danish sample) have an increasingly higher mean. In 2008 and 2017, Danish banks have the third highest mean, while in the other years, consumer companies do. This indicates that differences between the German and Danish means of companies belonging to the same sector may be explained by differences in the size of the companies in the respective sectors.

## 4. Report format and framework

CSR information can be published in different formats. The information coded for this paper was either from annual reports or independent CSR reports (SR). Annual reports can take the form of integrated reports (IR), but CSR information can also be published in a separate section of a company's annual reports (AR). Of the 75 German reports, a total of 25 published CSR information in AR format, only one German company published its four reports in IR format, while 46 reports were SRs. Of the 75 Danish reports, 16 were in AR format, 10 in IR format and 49 in SR format.

Graph 18 shows the distribution of reports across the three format types.

**Graph 18: Number of reports per format type in each country**




| | GER | | | DK | | |
|---|---|---|---|---|---|---|
| 2008 | 9 | 1 | 8 | 12 | 2 | 4 |
| 2011 | 7 | 1 | 11 | 3 ↓ | 2 | 14 ↑ |
| 2014 | 7 | 1 | 11 | 1 | 3 | 15 |
| 2017 | 2 ↓ | 1 | 16 ↑ | 0 | 3 | 16 |
| Total | 25 | 4 | 46 | 16 | 10 | 49 |

In the Danish sample, the number of ARs dropped significantly in 2011 (- 9), while the number of SRs increased by about the same amount (+ 10).[9] The German sample shows a similar observation in 2017 (AR decreases by 5, SR increases by 5). This indicates that the changes in CSR reporting regulation in both countries induced companies to switch from AR to SR format.

In total, 17 report format changes occurred[10]; 16 changes from AR to SR (7 German, 9 Danish) and one change from SR to IR (Danish). 11 of these companies were small (4 German, 6 Danish), 5 were medium sized (2 German, 3 Danish) and one was large (Danish). All sectors were represented. 14 of 17 (82%) of the changes led to an increase in the total quality score of more than 10 points. The average increase in total quality score following a change from AR to SR was 21,1 points. The change from SR to IR only led to a one-point increase.

Of the 150 reports, on 44 occasions the total quality score increased by at least 5 points from one coded year to the next[11]. They are almost evenly split between German (21) and Danish (23) companies and all sectors are represented almost proportionately in both countries. Yet, most of the German companies are small (10, compared to 5 large and 6 medium-sized), while most Danish companies are medium-sized (13, compared to 3 large and 7 small). 14 of these 44 increases were accompanied by changes in format, which are likely a reaction to changes in CSR reporting legislation. Of the remaining 30 reports, 24 are SRs. For 17 of the 24 SRs

[9] There are 18 reports for each country in 2008 and 19 reports in each country in the years thereafter, because 2 2008 reports could not be obtained.
[10] By 16 different companies, where one company changed format twice: from AR to SR to IR.
[11] e.g. an increase from 25 points in 2008 to 30 points in 2011

the increase in total quality score was accompanied by a significant increase in report length of 33% to 740% more pages. In an additional 4 reports, the reporting framework (e.g. UNGC COP or GRI) was changed.

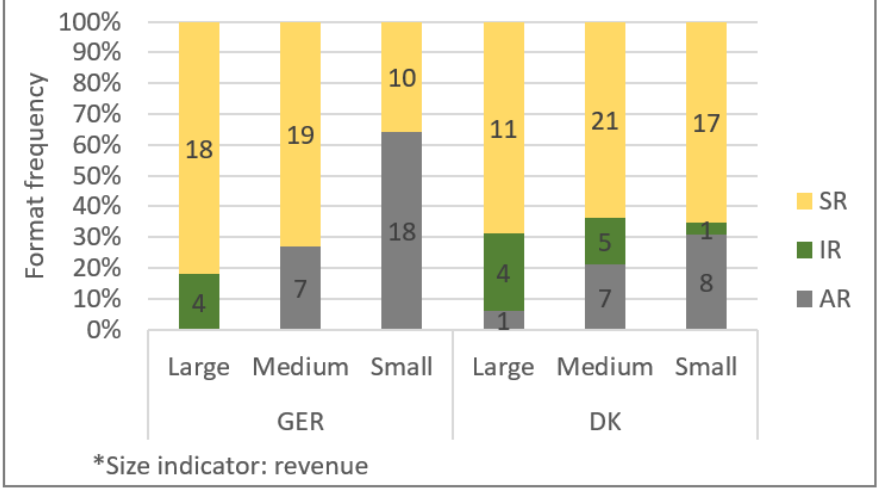
On 7 occasions the total quality score of a company's report decreased by at least 5 points from one year to the next. All the reports concerned were SRs. Five of them were issued by German companies and most are from the years 2014 or 2017. In 4 cases this was accompanied by a significant decrease in report length (29% to 90% fewer pages).

This indicates that report format, reporting framework (UNGC, GRI or free) and length impact CSR report quality. In the following, this is more closely examined by looking at company size and sector affiliation before focusing the analysis on SRs.

### 4.1. Size

Graph 19 shows the format frequency for the size segments in both countries as an aggregate of all years (see Appendix 6 for year-by-year table).

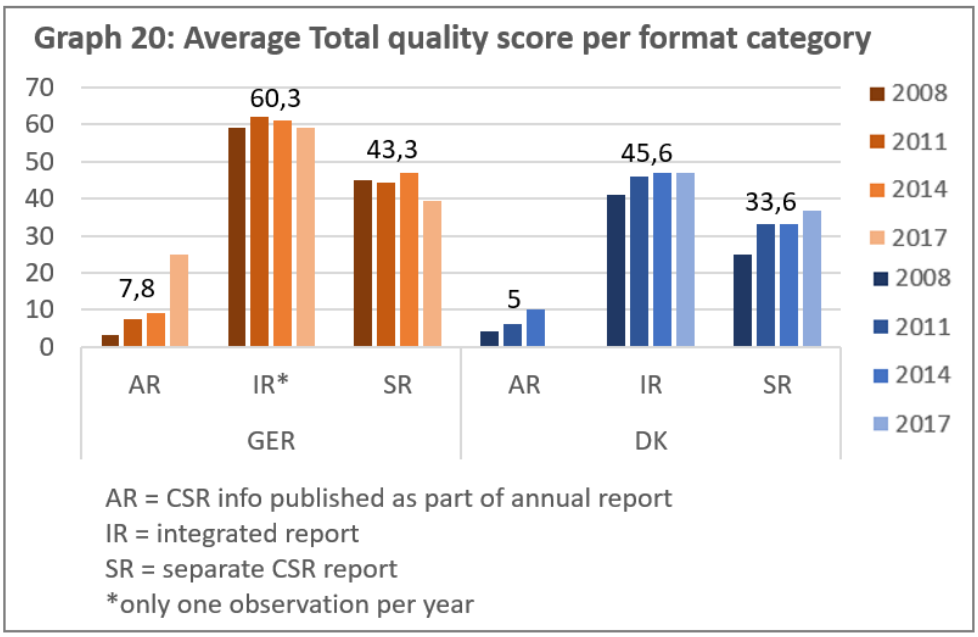
**Graph 19: Report format per size* segment and country**




For all size segments across both countries, SR reports are the most common reporting format, except the small German companies, who primarily publish ARs. This difference may be explained by the change in CSR reporting legislation as most Danish companies change from AR to SR in 2011, while German companies only switch in 2017. Most Danish small and medium-sized companies switch from AR to SR in 2011, while most German small companies switch only in 2017, which causes the significant overall difference in the small segment in the graph above.

In sum, these findings indicate that larger companies tend to issue SRs even in the absence of legislation, while small companies seem to publish SRs only under conditions of mandatory reporting.

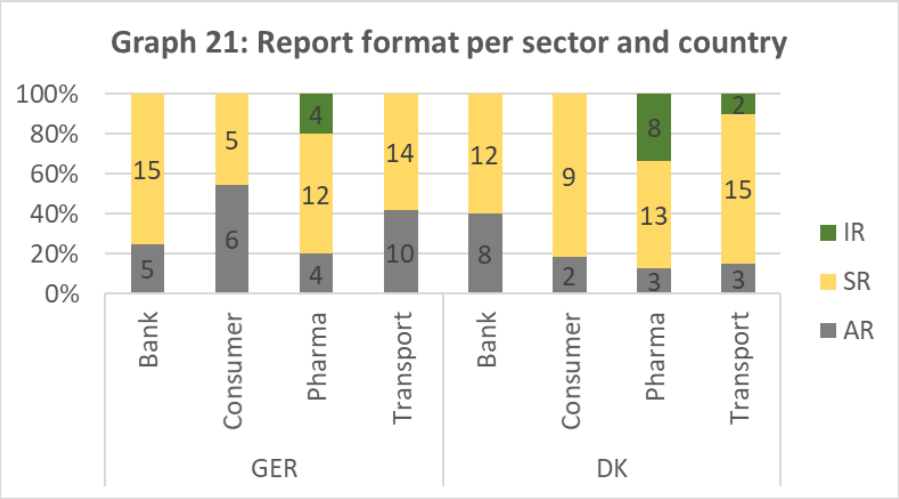
Graph 20 visualises the average Total quality score of German and Danish reports of different reporting formats. The numbers above the bars are the overall Total quality score means per segment, while the bars indicate each year's mean.



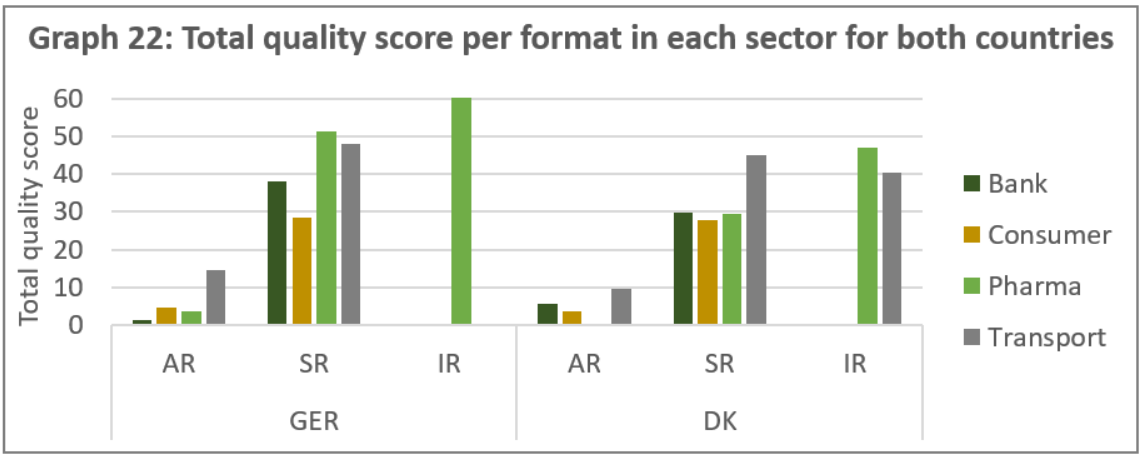

ARs have by far the lowest average quality in both countries, while IRs seem to be of higher quality than SRs. However, the group of companies that publish IRs is very small (only 1 observation per year in the German sample, 2-4 in the Danish sample). In the Danish sample, only pharma and transport companies issue IRs, but all size segments are represented. This means that no strong conclusions are in place. Yet, these observations contrast findings in previous literature (Michelon, Pilonato and Ricceri, 2015; Lock and Seele, 2016) that IRs provide a more holistic picture and more extensive information, but are not of superior quality compared to SRs. However, differing findings and contrasting conclusions in the literature may be rooted in the method of content analysis, where differences in the coding frames and the subjective element of the coding impact the comparability of studies on CSR report quality (Hooks and van Staden, 2011).

## 4.2. Sector

Graph 21 shows the format frequency for the different sectors in Germany and Denmark. The numbers in the bars show the total count per format. There seem to be sector-specific format preferences as depicted by different proportions of the three format types across the sectors within each country. However, these preferences seem to vary across countries as the proportions within the sectors are different for the German and Danish sample companies.




Graph 22 depicts differences in Total Quality score across the format types for all sectors in Germany and Denmark.




It mirrors the findings from above that within a given sector SRs are of higher quality than ARs and that the rarely used IRs have the highest quality on average. However, as mentioned above the small number of IR observations may have a skewing effect. There are some variations in Total quality score of reports of the same format across sectors. Transport companies in both countries seem to publish the best ARs. Also, Danish transport companies publish better SRs than Danish companies of other sectors. However, this may reflect the larger size of the Danish transport companies relative to the other Danish companies. The same is observed in the German sample, where pharma companies, the largest companies, also reach the highest Total quality score in their SRs. This indicates that size seems to impact report quality more than sector-affiliation and size seems to also affect the choice of format.

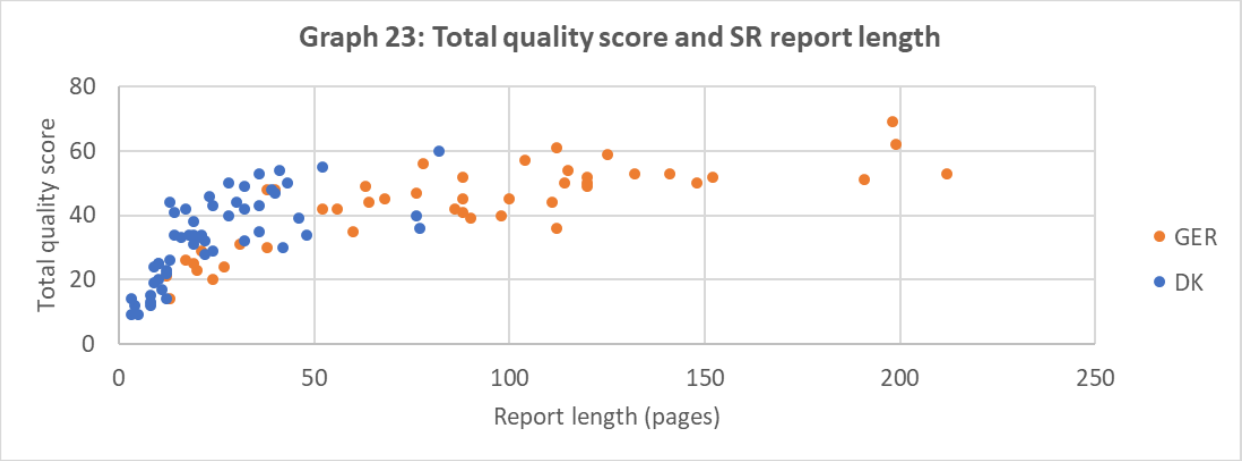
The next section provides a detailed analysis of SRs, the most common report format.

## 4.3. Focus on SRs

In total, there are 95 SRs in the sample (46 German, 49 Danish). They differ significantly in length and use of reporting frameworks.

### *4.3.1. Report length*

The SRs vary significantly in length across all years. The shortest SRs are only 3 pages long, while the longest is 212 pages long. Graph 23 plots SR length and total quality score of German and Danish companies.




German companies issue significantly longer reports than the Danish companies. The average length of all German SRs is 87 pages with an average total quality score of 43,3 compared to an average length of 25,1 pages with an average total quality score of 33,1 for the Danish companies.

The distribution of SRs in the plot indicates a positive association of report length with quality. This is in line with previous research (Hooks and van Staden, 2011) and also explains the lower average quality of ARs (the overall mean is below 8 in both countries). The CSR sections in annual reports rarely fill more than a few pages[12]. SRs of comparable size also only reach a total quality score mean of around 10-15 points.

A positive relation between report length and the total quality score is inherent in the scoring system of the coding frame used here. The more details a company provided and the more sub-categories it reported on, the higher a score was awarded. This means that a positive relationship of report length and total quality score necessarily follows from the research design. Yet, the distribution in the graph indicates that there are diminishing returns to report length. Thus, the total quality score does not merely depict report length as only relevant information was coded. Previous research has pointed out, lengthier reports allow a company to describe its policies, actions and outcomes in due detail and cover a larger number of the sub-topics that

[12] The length of reporting the AR format was not counted as information sometimes was scattered over the report, which made a precise page count difficult.

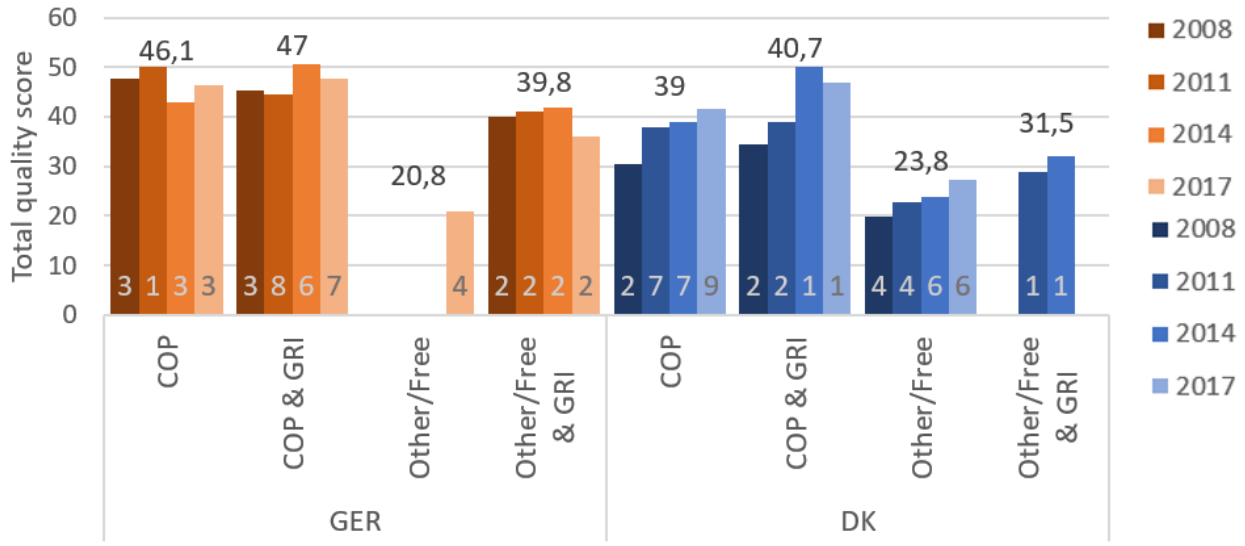
are part of the evaluation framework (Lock and Seele, 2016). However, beyond a certain length, additional information does add insight but rather has the adverse effect of diluting relevant information with irrelevant or even distracting details (Michelon, Pilonato and Ricceri, 2015).

The scatterplot clearly shows that German companies tend to issue significantly longer SRs than Danish companies without reaching much higher levels of total quality. This means that many German SRs contained a lot of noise, information that was either not coded at all or not considered value-adding. This is elaborated on in greater detail further down.

### *4.3.2. Reporting framework*

The SRs in the sample differ in their use of reporting frameworks. Most SRs in both countries use the UNGC framework and are published as a COP. Some of these COPs additionally draw on the GRI guidelines, but also non-COP reports use the GRI guidelines as a framework. A few German companies use the German sustainability code (DNK) as a frame for their SR, while other companies do not use any external framework. Graph 24 shows the average total quality score of SRs using different framework options. The numbers above the bars are the overall averages for each reporting framework category. The numbers in the bars show the total count of such reports per year.

**Graph 24: Mean Total quality score of SRs with different reporting frameworks**




COP = UNGC Communication on Progress
COP & GRI = COP report that provides at least also a GRI Index
Other/Free = Other framework (DNK for German companies) or no external framework
Other/Free & GRI = Other/Free report that provides at least also a GRI Index

COP reports that also provide at least a GRI Index have the highest average quality in all years in both countries, followed by pure COP reports. Yet, the frequency of report format as indicated by the numbers in the bars seems to reveal different preferences in reporting framework of German and Danish companies. Among German reports, the combined COP & GRI reports are most common (24 reports in total), followed by COP reports (10 reports). In the Danish sample, COP reports (25 in total) and free reports without external framework (20 reports) are most common. Free reports are least common in the German sample (except in 2017), while free reports that apply the GRI guidelines are least common in the Danish sample (only 2 in total).

In the Danish sample, the number of COPs jumps from 2 in 2008 to 7 in 2011. As argued above, this suggests that mandatory CSR reporting regulation seems to have encouraged Danish companies to join the UNGC. This indicates that Danish companies seemed to have joined the UNGC and publish COPs to comply with mandatory CSR reporting requirements, while German companies all joined several years before Germany introduced mandatory reporting in 2017. Thus, their registration was not motivated by compliance with reporting regulation. As argued above the motivations for joining the UNGC may impact the quality of the COPs, but more research would be needed to identify causal relationships.

In sum, Danish companies seem to prefer the COP framework or no external framework. The use of the GRI guidelines does not seem common. German companies by contrast seem to prefer the use of external frameworks over publishing free reports. This is also reflected in a high number of reports that combine the COP and GRI frameworks. These different preferences for reporting framework may be due to cultural differences or different approaches to CSR in Germany and Denmark. Furthermore, the use of external frameworks seems to increase report quality, while a combination of COP and GRI frameworks seems to lead to higher average quality than the use of either of these frameworks in separation. By contrast, Michelon et al (2015) did not find a positive impact of using the GRI guidelines on overall report quality. However, as pointed out above, differences in findings may be rooted in differences in the report quality evaluation framework applied in other studies.

#### *4.3.3. Comparing CREDIBILITY, DISCLOSURE and report length*

As graph 23 showed, German companies publish significantly longer SRs than Danish companies, but only reach a 10 points higher average Total quality score. Chauvey et al (2015) compare the length of SRs to their informational quality to make inferences about the company's motivation to disclose CSR information. They find evidence for managerial capture in form of lengthy reports that burry stakeholders with not very informative disclosure that dilutes the content. They interpret this as evidence that companies use CSR disclosure as a tool of stakeholder perception management for legitimisation purposes. Applying this line of

reasoning to the research design here comparing a company's DISCLOSURE and CREDIBILITY sub-scores while considering report length may allow to draw inferences on the company's intention behind the disclosure.

Table 5 shows the mean DISCLOSURE and CREDIBILITY scores for the companies that published SRs as a percentage of the respective maximum possible score. Thus, it compares the observed CREDIBILITY and DISCLOSURE scores to the best potential outcome under the evaluation framework used here. Hence, CRED* indicates the extent of the overall quality of information and DISC* indicates the extent of relevant information that was disclosed. #SR is the average report length per segment in pages. DISC/#SR is a proxy for dilution. It is calculated by dividing the mean DISCLOSURE score of a given segment by its average report length in pages. This means that the larger the ratio of the dilution proxy, the smaller the amount of dilution. By way of example, in 2011 the small Danish (new SR reporters) companies have a dilution proxy of 0,98. This means that they were awarded about one point per page of their report (an average DISCLOSURE score of 11,8 on 12 pages on average). As the maximum possible score in the DICLOSURE sub-score is 67, this results in 18% relevance of disclosed information (11,8 divided by 67). The maximum score in the CREDIBILITY sub-score is 16, which leads to 31% credibility (an average CREDIBILITY score of 5 divided by 16). By contrast, the large German companies have a dilution proxy of 0,24 in 2008 (an average DISCLOSURE score of 23,5 divided by 98 pages on average). This means that on average they received one point for each four pages of their report. Yet, they reach a DISCLOSURE relevance of 35% (23,5 divided by 67). This means that the large German companies in 2008 provided more relevant information than the small Danish companies in 2011, but the information was more diluted. Companies that switched format from AR to SR are listed separately as "new SR" under their respective size segment.[13]

[13] This does not imply that these companies issue an SR for the first time, as they might have published SR reports in the unobserved years, e.g. 2009 or 2013.

**Table 5: Relevance of information, extent of credibility, report length and dilution of SRs**

| | 2008 | | | | 2011 | | | | 2014 | | | | 2017 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CRED* | DISC* | #SR | DISC/ #SR | CRED* | DISC* | #SR | DISC/ #SR | CRED* | DISC* | #SR | DISC/ #SR | CRED* | DISC* | #SR | DISC/ #SR |
| **GER - Large** | 69% | 35% | 98 | 0,24 | 71% | 39% | 116 | 0,22 | 67% | 43% | 114 | 0,254 | 78% | 47% | 125 | 0,26 |
| **~new SR** | | | | | | | | | | | | | | | | |
| **DK - Large** | 53% | 27% | 42 | 0,43 | 63% | 40% | 64 | 0,41 | 71% | 42% | 34 | 0,84 | 71% | 40% | 41 | 0,65 |
| **~new SR** | | | | | 44% | 34% | 19 | 1,21 | | | | | | | | |
| **GER - Medium** | 63% | 35% | 80 | 0,29 | 58% | 41% | 75 | 0,37 | 68% | 43% | 124 | 0,23 | 64% | 36% | 76 | 0,32 |
| **~new SR** | | | | | | | | | | | | | 44% | 39% | 86 | 0,3 |
| **DK - Medium** | 34% | 11% | 16 | 0,47 | 66% | 27% | 21 | 0,86 | 52% | 33% | 23 | 0,948 | 61% | 38% | 28 | 0,9 |
| **~new SR** | | | | | 45% | 30% | 26 | 0,76 | | | | | | | | |
| **GER - Small** | | | | | | | | | 47% | 30% | 44 | 0,46 | 50% | 19% | 29 | 0,45 |
| **~new SR** | | | | | 39% | 28% | 41 | 0,46 | | | | | 21% | 21% | 21 | 0,66 |
| **DK - Small** | | | | | | | | | 38% | 20% | 12 | 1,081 | 38% | 21% | 19 | 0,76 |
| **~new SR** | | | | | 31% | 18% | 12 | 0,98 | 22% | 16% | 7 | 1,5 | 38% | 28% | 32 | 0,59 |

**% of maximum possible score calculated as mean DISCLOSURE or CREDIBILITY score divided by respective maximum possible score*
*#SR = average number of pages in SR reports*
*DISC/#SR = mean DISCLOSURE score divided by #SR*

Across all segments, new SR reporter or not, both German and Danish SRs reach a higher extent of credibility than relevance of information, indicated by a higher CRED* than DISC* for all observations, except the small German new SR reporters in 2017. Across all size segments (not new SR), the German SRs are significantly longer than the Danish SRs. Also, when comparing the size segments from each country that are comparable in terms of absolute size (German medium and Danish large, German small and Danish medium), this pattern prevails.

The relevance of information (DISC*) disclosed by large German companies increases incrementally by about 4% points each year independent of the legal context. Previous research found that isomorphic pressures can explain such development as companies read competitor's reports to benchmark and copy best practice (Hammond and Miles, 2004; Pedersen *et al.*, 2013). The quality of information (CRED*) by contrast is less stable and varies between 67%-78%. Under conditions of voluntary reporting (2008-2014), the combination of a low to moderate information relevance, but quite high extent of credibility indicates that large German companies report only on selected topics where they feel confident to be transparent and/or have the information audited[14] but dilute the information in their long reports. This is reflected in their low DISC/#SR ratio of 0,24. In 2011 it drops further to 0,22. Following Chauvey at al (2015), this is interpreted as an indication for perception management. Under conditions of mandatory reporting in 2017, the picture does not change. The positive trend in the extent of relevant information continues at the same low rate as in

[14] The Crediblity score measures i.a. whether a report is externally audited and how much information a company discloses on their data collection methods and process, definitions of KDIs, assumptions, etc.

previous years. The credibility of information increases by 11% points, but also the average length of the reports, keeping up the high extent of dilution. As mentioned in above parts of the analysis, this indicates that the German large companies do not seem to react strongly to the change in CSR legislation. In sum, the observations of the large German companies suggest that they are primarily using CSR reporting as impression management tools to influence their stakeholders' perceptions independent of the legal context. In support of this, e.g. the report of one large German company described that the company has a "Reputation and Sustainability Management" department.[15]

Under conditions of voluntary reporting (2008), large Danish companies' SRs are of moderate credibility (53%) with rather low relevance (27%). This indicates that large Danish companies only report on selected topics, but they are not trying to send a strong credible signal. The information is less diluted than in the reports of large or medium-sized German companies. This means that there is neither strong evidence for signalling nor perception management. Under conditions of mandatory reporting (2011 to 2017), the relevance of information disclosed by large Danish companies jumps to 40% in 2011 (new reporters only reach 34%), increases to 42% and drops to 40% in 2017. The credibility of information disclosed by large Danish companies increases from 53% in 2008 to 63% in 2014 and stagnates at 71% from 2014 to 2017. The extent of dilution for the large Danish companies that are not new reporters remains stable from 2008 to 2011 as both the extent of relevant information and report length increase. The increased credibility may suggest that these companies attempted to send a credible signal to the market. Thus, the development may indicate that in reaction to the introduction of mandatory reporting in 2009, large Danish companies increased the extent of their reporting, and also the credibility of information. This seemed to have encouraged some large Danish companies to change format from AR to SR. The reports of these new SR reporters are much shorter with lower levels of credibility and relevant information, but also lower level of dilution. The low level of credibility suggests that these companies did not want to send credible signals to the market. Yet, neither is there an indication for perception management due to the low level of dilution. This suggests that the large Danish new SR reporters primarily wanted to comply with the law. In 2014, the extent of credibility is rather high with moderate levels of relevance and rather little dilution. This suggests that in 2014, large Danish companies seemed to use their SRs to send credible signals about selected CSR areas. Dilution increases again in 2017 while CRED* and DISC* remain stable. This may indicate that the large Danish companies are beginning to use SRs as means of perception management, yet, not to the same extent as large German companies.

[15] Commerzbank 2011

Under conditions of voluntary reporting (2008-2014), the medium-sized German companies show low to moderate levels of relevant information and moderate to high levels of credibility with a rather high extent of dilution. Following the argumentation for the large German companies, this suggests that also the medium-sized German companies seem to use SRs as perception management tools. Under conditions of mandatory reporting (2017), some German medium-sized companies change format. These new SR reporters reach a significantly lower level of credibility, but a comparable level of relevance. The high extent of dilution combined with the low to moderate level of relevance suggests that the German medium-sized companies (also the new SR reporters) seem to use SR reports as perception management tools both under conditions of voluntary and mandatory reporting. The quite similar level of relevant disclosure and report length may point to isomorphic pressures such as peer mimicking.

Under conditions of voluntary reporting (2008), Danish medium-sized companies reach low levels of credibility and relevance with moderate dilution. This neither suggests that they are trying to send credible signals, nor does this support an assumption of perception management. Under conditions of mandatory reporting (2011-2017) the credibility of reports jumps up to moderate/high levels (between 52%-66%), also the information relevance jumps from 11% in 2008 to 27% in 2011 and then continues to increase to 33% in 2014 and 38% in 2017. The extent of dilution remains constant at low levels from 2011 to 2017. This suggests that the Danish medium-sized companies aim to send credible signals about selected CSR efforts. The new SR reporters in 2011 show lower credibility, which may be due to lack of experience.

Under voluntary reporting (2008-2014), German small companies publish SRs for the first time in 2011. Remarkably, their reports are much longer than those of the small Danish companies (which were obliged to report at that point) but are rather comparable in length to the large Danish companies. The relevance and credibility of their reports is rather low for the whole period with moderate dilution. This can be interpreted as weak evidence indicating that also the small German companies seem to rather see CSR reporting as a tool for perception management than for sending credible signals. In 2017 under conditions of mandatory reporting, some additional small German companies publish SRs. Their SRs are shorter and of lower credibility and relevance than the reports of small German companies that have published SRs before. The low credibility and relevance (both 21%) of these new SR reporters in combination with moderate levels of dilution suggest that the primary motivation for these companies was neither to send a credible signal nor to manage perceptions but rather to comply with the new legislation. In 2017, the level of credibility of small German companies that have published SR reports before increases slightly while the relevance of information drops by 11% points with constant moderate level of dilution. This seems surprising. Consequently, the combination of a low level of information relevance, moderate credibility and dilution

does not provide strong evidence for either signalling or perception management. Institutional explanations of changes in peer pressure or copying may provide an answer to this puzzling observation.

The small Danish companies only publish SRs under conditions of mandatory reporting (2011-2017). This suggests that voluntarily (in 2008) they do not seem to be interested in sending signals about their CSR efforts. This may be because they do not engage in activities that they deem worth reporting or because they lack the resources or pressure from stakeholders to publish an SR or a combination of these and/or other factors. The SRs issued by small Danish companies (also new SR reporters) reach low levels of credibility and relevance with little dilution. This indicates that they do neither attempt to send strong signals or manage their stakeholders' perceptions, but rather publish SRs to comply with the legal requirements.

In sum, this indicates that the motivations to issue SR reports differ between German and Danish companies, across the size segments and under different legal conditions. German large and medium-sized companies seem to publish SRs to manage stakeholders' perceptions both under conditions of voluntary and mandatory reporting. Under conditions of voluntary reporting, Danish large and medium-sized companies do not seem to publish SR reports to manage stakeholder perceptions, but due to the moderate to low credibility, these reports neither work to send credible signals. Thus, it seems that the Danish large and medium-sized companies voluntarily publish SR reports to send some signals but without using many resources to increase the credibility of their signalling. In 2008, they may have been motivated to publish an SR in anticipation of the coming change in legislation in 2009. Under conditions of mandatory reporting, Danish medium-sized companies seem to use SRs to send credible signals, while observations are mixed for the large Danish companies. They seem to use the SRs to send credible signals in 2014 but seem to move towards using them for perception management in 2017. In the small segment, there is a slight indication that the German companies seem to aim for perception management when publishing SRs voluntarily, but under conditions of mandatory reporting, this does not seem to be the case anymore. Additional small German companies (new SR reporters) seem to publish SRs in 2017 primarily to comply with the law. Compliance with legal requirement also seems to be the main motivation for the small Danish companies, which only publish SRs under conditions of mandatory reporting.

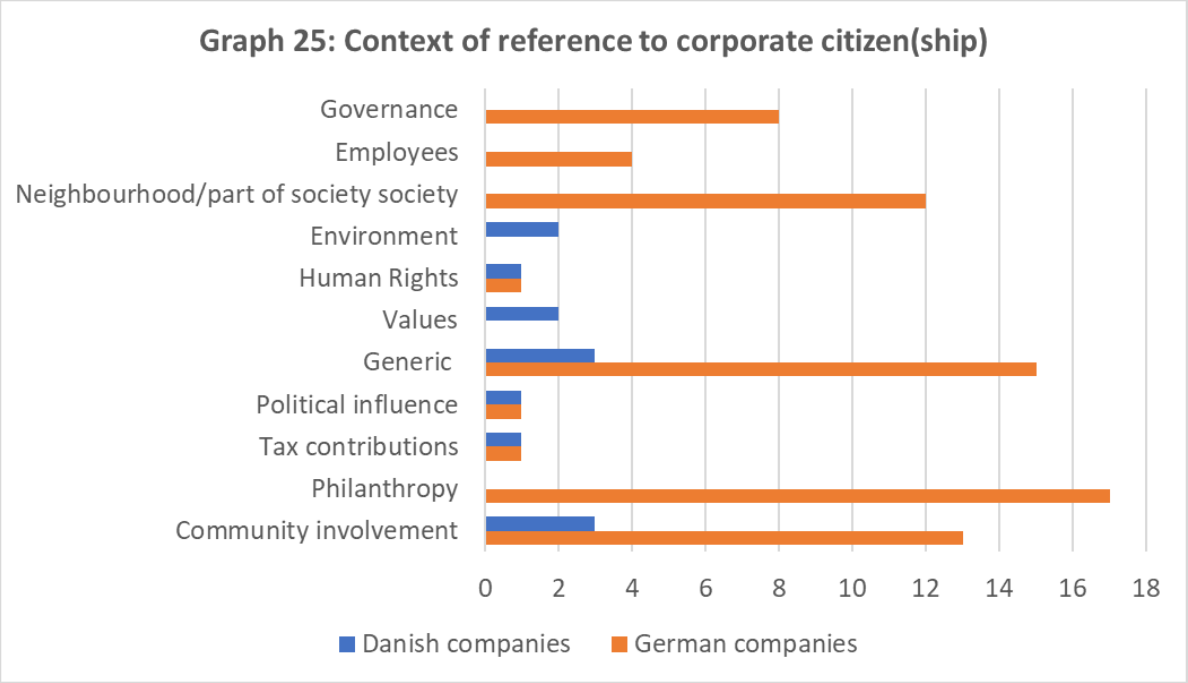
In conclusion, some of the observed differences in CSR reporting of German and Danish companies do not seem to be explained by size, sector affiliation or differences in CSR reporting regulation. Further, German and Danish companies seem to have different preference regarding the choice of reporting framework and their SRs differ greatly in length. Evidence further suggests that they differ in terms of whether they aim to send credible signals with their SRs or manage stakeholders' perceptions. This indicates a country-of-origin

effect beyond differences in legislation. Therefore, the following section addresses another possible country of origin effect, namely culture.

## 5. Use of the term "Corporate citizenship" as a proxy for culture

As pointed out in the literature review above, besides legislation, culture is an important aspect that differs across countries. The literature has found that national culture impacts CSR reporting because it influences the approach to CSR and the orientation towards CSR disclosure (Martínez-Ferrero and García-Sánchez, 2017). Matten and Moon (2008) argue that the understanding of CSR (implicit or explicit) often is reflected in the language that companies use in their CSR communication. It is not argued that Germany and Denmark differ in their approach to CSR (implicit vs explicit according to Matten and Moon's definition). Rather, it is argued drawing on their work that differences in the language used in CSR reports may indicate differences in the national approaches to CSR or culture. It is thus insightful to analyse differences in the language of how companies describe themselves and their CSR-related activities in their CSR disclosures.

Graph 25 shows differences between German and Danish companies in the use of variations of the term good/corporate/active/responsible citizen(ship) referring either to themselves as citizens or to their actions as activities of citizenship.

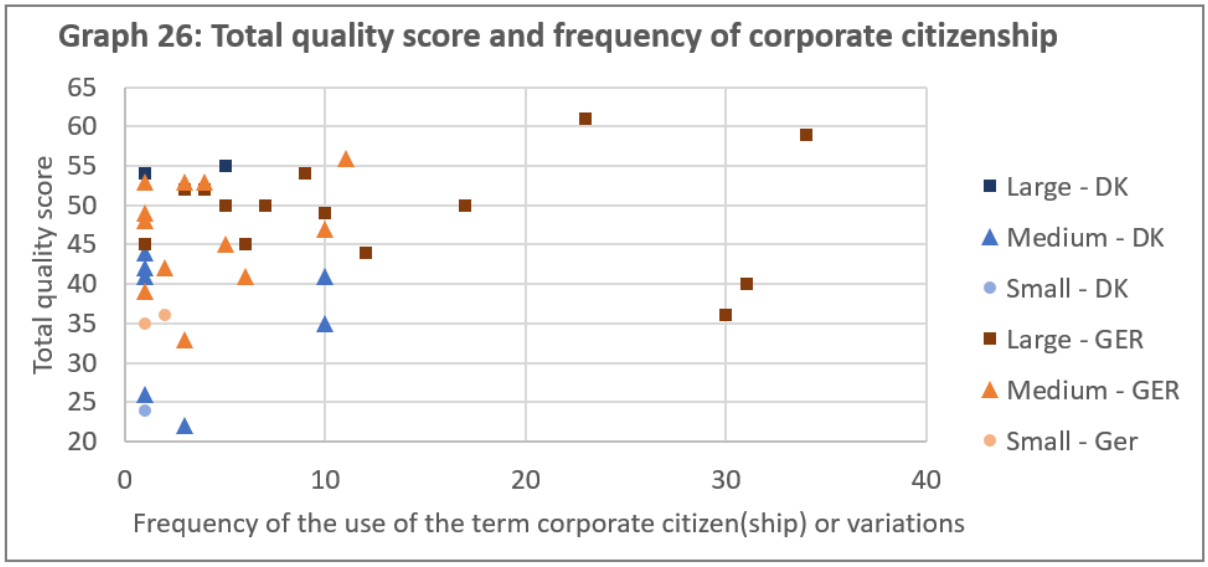



German companies tend to refer to themselves or their action as corporate citizen(ship) much more often than Danish companies. In total, 33 reports distributed across 13 individual German companies use the term compared to 10 reports issued by 6 individual Danish companies. This shows that not only do more German

companies use the term, they also tend to do so more repeatedly. Furthermore, also the context in which companies from both countries use the term is quite different. While German companies primarily use the term to refer to philanthropic activities, Danish companies rather refer to activities of community involvement. While only Danish companies have referred to the term in the context of their corporate values and the environment, only German companies have used the term in relation to their employees, corporate governance or to describe themselves literally as neighbours or participants in society often by referring to their relationship with people living close to their facilities.

This indicates systematic differences in the use of the term corporate citizen(ship) between German and Danish CSR reports. It is suggested that this linguistic and contextual difference can be interpreted as an indication of a reflection of a difference in culture.

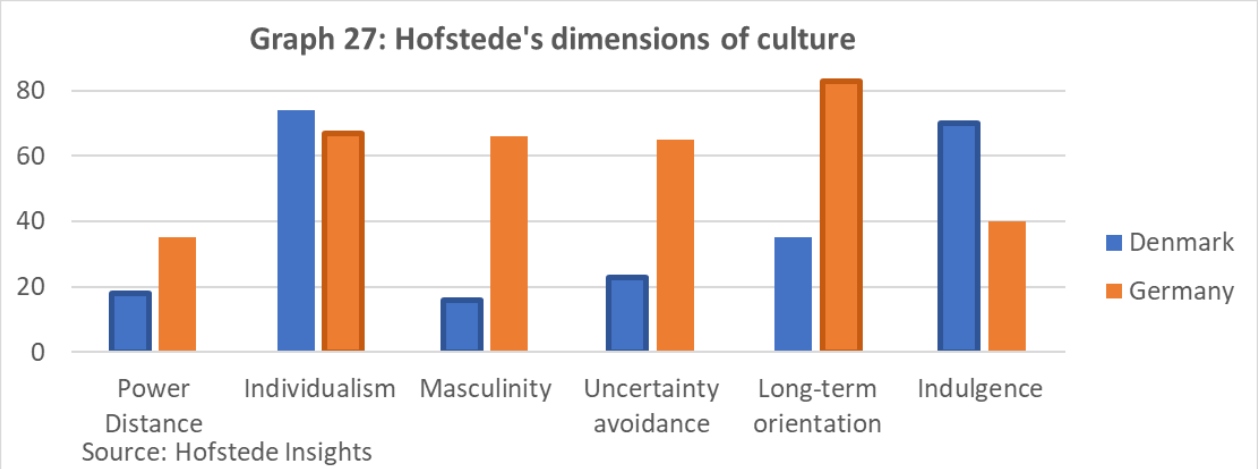
Graph 26 shows the relationship of a report's total quality score and the frequency of references to variations of the term corporate citizen(ship).




The lowest score of a report containing a reference to corporate citizen(ship) is 22. The plot shows that large German companies tend to use the term most frequently, but higher frequency of use is not necessarily accompanied by a higher total quality score. This shows that the frequency of the use of the term does not seem to be associated with higher report quality. However, further research would be needed to investigate in greater detail how differences in national culture are reflected in corporate CSR communication and how this affects report quality.

Garcia-Meca et al (2018) suggest another approach to understanding the effect of differences in national culture on CSR reporting. They analysed the impact of Hofstede's dimensions of culture on CSR disclosure

and found that weak cultural systems, which they define as individualist, masculine societies with high power distance that are short-term oriented with little indulgence and a high level of uncertainty avoidance have a moderating effect on CSR disclosure. Graph 27 compares Germany and Denmark along Hofstede's dimensions of culture using the same evaluation tool as Garcia-Meca et al (Hofstede Insights, no date).



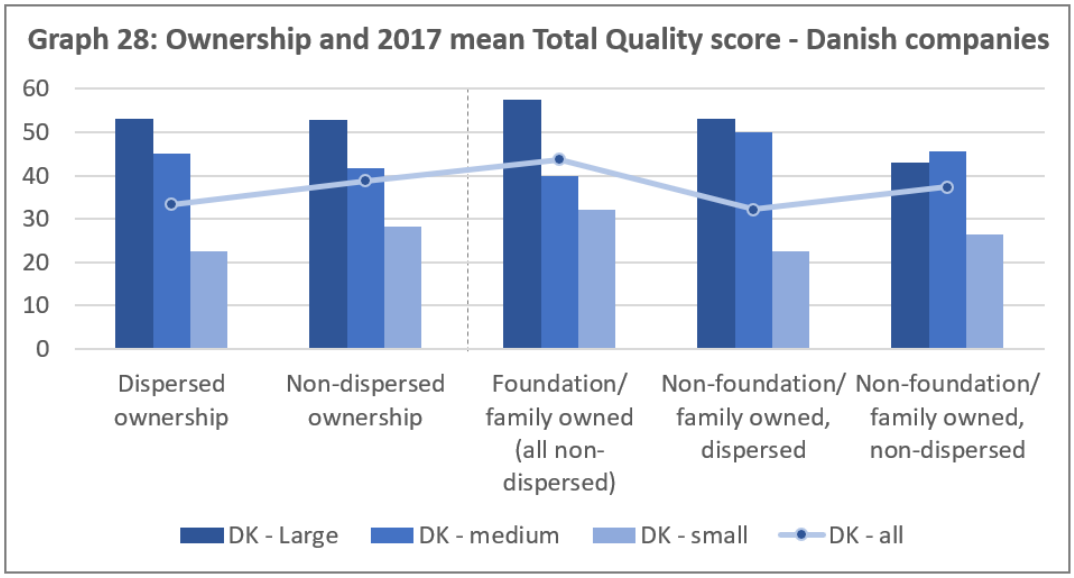

According to Garcia-Meca et al, Denmark has a stronger cultural system than Germany because Danish society has a lower power distance, is more feminine with a lower level of uncertainty avoidance and a higher indulgence. Germany is slightly more collectivist than Denmark and has a higher long-term orientation. However, the comparison of German and Danish CSR reports here has shown that German companies on average tend to publish higher quality CSR reports than Danish companies. It is beyond the scope of this paper to examine whether and how differences in culture could explain various differences in the sub-scores reported above. However, this indicates a relevant area for further research to analyse how differences in national culture are reflected in CSR reports and how this seems to affect report quality.

## 6. Ownership

As described in the literature above, ownership was found to impact CSR reporting. A positive relationship was found for dispersed ownership and a negative for concentrated ownership[16] (Brammer and Pavelin, 2006; da Silva Monteiro and Aibar-Guzmán, 2010; Gamerschlag, Möller and Verbeeten, 2011).

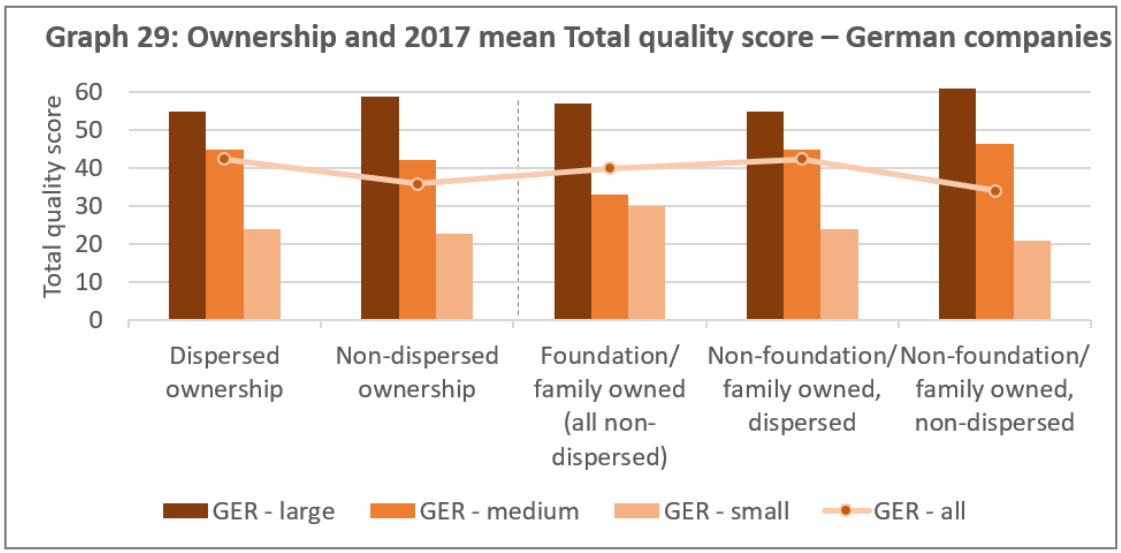
Graph 28 shows the 2017 mean Total quality score for Danish companies with different ownership structures.[17]

[16] Ownership is concentrated when one investor holds more than 20% of shares. Here also ownership by one investor of 15-19,9% was counted as non-dispersed or when more than two investors held 10-15%.
[17] Data collected from cvr.dk




There is little difference in the overall quality between reports of large companies with dispersed and non-dispersed ownership. Medium-sized companies publish better reports under dispersed ownership, while small companies publish better reports under non-dispersed ownership. Yet, overall quality is higher under non-dispersed ownership. This may be due to the high number of Danish companies (7 of 18) that are owned by a foundation (with 25%-100% ownership). This seems to positively impact the report quality of large and small companies. Medium-sized companies however score higher without foundation ownership.

Graph 29 shows the 2017 mean Total quality score for German companies with different ownership structures.[18]




[18] Data collected from company homepages

For the German companies dispersed ownership leads to slightly higher overall report quality than non-dispersed ownership. Only 3 of 18 German companies are foundation or family-owned (50-67% ownership). Yet, by contrast to the Danish companies, family or foundation-ownership only seems to positively affect small companies, while large and medium-sized companies report better under non-dispersed ownership without the involvement of a foundation/family.

These observations indicate that different ownership structures are more common among German and Danish companies. Even under similar legal conditions in 2017 the various ownership structures seem to have different effects on the report quality of German and Danish companies. Yet, more research would be needed to make inferences about effects and causal relations.

The literature review above has also pointed to other factors, such as profitability, social and environmental performance, managerial attitude, governance and extent of media coverage as determinants of CSR report extent and quality. However, it would be beyond the scope of this thesis to cover all these factors in due detail.

# VII. Conclusion

The aim of this paper is to answer the question of how differences in CSR reporting of German and Danish listed companies can be explained, with a particular focus on the impact of CSR reporting legislation.

## 1. Summary of findings

The above analysis has pointed out that several factors seem to influence the CSR report quality of German and Danish companies, lead to differences in CSR report quality each year, and different developments over time.

CSR report quality differs across companies of different size and different sectors within each country, but also between German and Danish companies of similar size or of the same sector. Thus, a combination of external factors such as the country of origin (CSR report legislation, national culture) and sector affiliation, internal factors such as firm size and ownership structure, as well as report characteristics like report format, length and choice of reporting framework seem to impact CSR report quality and may explain differences in reporting of German and Danish companies. Legislation overall seems to have a moderating effect on other factors, such as firm size, and seems to lead to a convergence of CSR report quality of German and Danish companies of all size segments and sectors to a higher level.

### 1.1. Legislation

Mandatory reporting in both countries significantly reduced the number of low-quality reports (scoring below 20), yet without increasing the number of higher quality reports (scoring above 50) by the same magnitude. Thus, mandatory CSR reporting regulation seemingly improves overall report quality by lifting the quality floor without lifting the quality ceiling. This may reflect that the quality evaluation frame was much broader than what is required by law. This finding seems to support the argument that mandatory reporting may result in a "tick-the-box" exercise where companies restrain to reporting on the categories prescribed by the law (de Colle, Henriques and Sarasvathy, 2014).

However, mandatory reporting, particularly the very similar legislation in both countries in 2017 has closed the gap between German and Danish companies of the same size segment, but also between German and Danish companies of the same sector. In 2008, under mutual conditions of voluntary reporting, the German companies tended to publish better reports than the Danish companies, while the overall quality was very similar and significantly higher in both countries in 2017 under mutual conditions of mandatory reporting. This indicates that legislation seems to moderate other country-of-origin effects on CSR report quality, such as differences in culture, but also differences in company size. For some sub-scores (Business Ethics and Development) legislation even seems to reverse the effect of differences in size leading to higher scores of the Danish companies in most size segments.

Furthermore, mandatory legislation seems to induce companies to switch from reporting as a part of their annual report to publishing separate CSR reports, which in turn tends to result in more detailed reporting and thus mostly in a higher overall report quality.

In sum, similar CSR reporting legislation seems to lead to a convergence of CSR report quality to an overall higher level. This seems to support institutional theory of isomorphic (coercive and mimetic) pressures from legislation, society's expectations and peer imitation.

### 1.2. Size

Throughout the analysis of the various sub-scores, the evidence supports that firm size affects overall quality and how much relevant information companies tend to publish: Large companies tend to score higher than medium-sized companies with small companies scoring lowest.

Particularly in the absence of legislation, size seems to matter in absolute terms. In many parts of the analysis the averages in the different sub-scores reflected differences in size between German and Danish companies belonging to the same size segment, where the larger German companies score higher than their Danish counterparts. However, this is not the case in the small segment, where the comparatively smaller Danish

companies often score comparably to the German companies under conditions of mutually voluntary reporting, but reach a higher score under mandatory reporting, which prevails even after Germany also introduced mandatory reporting.

When comparing companies of the same size segments, German companies tend to score higher than their Danish counterparts. However, when comparing the scores of companies that are comparable in terms of absolute size (German medium-sized and Danish large, German small and Danish medium-sized), the Danish companies tend to score higher. This indicates that absolute size seems to be a stronger determinant of CSR report quality in the absence of legislation, while relative size remains a strong determinant also in the presence of legislation. Yet, evidence also points to country-of-origin effects, such as differences in national culture.

Furthermore, size seems to affect companies' responsiveness to legislation. Large companies tend to respond least to changes in regulation, while Danish medium-sized and German small companies showed the strongest reactions (they are of similar size).

Additionally, firm size seems to affect how detailed a company reports on employee matters. However, legislation has a moderating effect.

### 1.3. Sector

Under voluntary reporting in 2008, there are significant differences between companies of different sectors within each country. Additionally, differences exist between companies belonging to the same sector across countries. However, these differences may be impacted by size differences of companies in the four sectors but may also reflect differences in national culture. These cross-country intra-sectoral differences are significantly reduced in 2017 under mutually mandatory regulation, while inter-sectoral differences prevail largely unchanged among the Danish companies but halve among the German companies.

Companies in environmentally-sensitive sectors tend to disclose more relevant environmental information than companies from less sensitive sectors. However, size seems to have an enhancing effect as indicated by the observation that in both countries the environmentally-sensitive sector with the larger companies scored highest on the Environmental sub-score (transport companies in the Danish sample and pharma companies in the German sample).

Further, contrary to previous findings, B2B companies seem to publish better reports than B2C companies. However, this observation may be impacted by the differences between the sample companies in different sectors, as the B2B sample companies tend to be larger than the B2C sample companies.

Sector affiliation seems to also impact how strongly companies react to changes in legislation. Both German and Danish consumer companies (which tend to be rather small) showed among the strongest increase in overall report quality following a change in legislation. In the Danish sample, the transport companies seem to react strongest and quickest to legislative changes, while Danish banks seem to show the slowest response.

### 1.4. Culture

Some observations indicate an effect of national culture on CSR reporting. The higher scores of German companies under conditions of voluntary reporting may not only be due to their larger size, but could also reflect cultural differences. The same can be argued for the small Danish companies that tend to score higher than the (comparatively larger) small German companies.

Also, for some sub-scores, German or Danish companies tend to score systematically highest or lowest despite size differences or differences in legislation. For example, with their moderate level of reporting, the large German companies report most detailed on Human Rights matters. The large Danish companies report in greatest detail of all sample companies on Business Ethics and Danish companies of all size segments report in greater detail on Development than the German companies after mandatory reporting was introduced in Denmark. Even after introducing similar laws in Germany, these differences remain unchanged. It was argued that these differences may be explained with the different motivations of German and Danish companies for joining the UNGC. While German companies all registered with the UNGC voluntarily years before the introduction of mandatory CSR reporting in Germany, many of the Danish companies seemed to have joined the UNGC in reaction to the change in legislation. Hence, the motivation for joining the UNGC seems to impact the quality of the COP reports.

Furthermore, the German SRs are significantly longer than the Danish reports and differ in their choice of reporting framework. While German companies seem to prefer external frameworks by combining the UNGC with the GRI frameworks, the use of the GRI guidelines is rather uncommon among the Danish companies, which mostly publish SRs as COPs or without an external framework.

Furthermore, observations on differences in the frequency and context of use of the term corporate citizen(ship) suggest that differences in the language used in CSR communication may indicate differences in national culture and approaches to CSR.

### 1.5. Ownership

The analysis showed that different kinds of ownership seem common for German and Danish firms and that this seems to affect report quality. Foundation or family ownership is much more common among the Danish

companies, which may affect the observation that Danish companies tend to issue better CSR reports under non-dispersed ownership, while for the German companies the opposite is observed.

## 2. Answering the research question

In conclusion, differences in CSR report quality between German and Danish listed companies may be explained by a combination of firm internal and external factors. Firm size seems to positively impact overall report quality and reporting on employee matters, while sector affiliation seems to impact the extent of reporting on certain CSR topics, such as environmental matters. National culture and ownership also seem to influence CSR report quality through differences in stakeholder expectations, which may explain differences in the extent of reporting on certain topics or differences in choice of format and reporting framework. Finally, mandatory CSR reporting legislation seems to improve the overall CSR report quality and fosters a convergence of report quality of German and Danish companies at an overall higher level than under voluntary reporting. Thus, mandatory reporting in Denmark seems to have moderated the effect of factors causing differences in report quality between German and Danish companies such as firm size. It further seemed to encourage companies from both countries to switch from AR to SR format, which seems to result in higher report quality. Furthermore, the analysis pointed out that motivations to publish reports may differ between German and Danish companies and across companies of different size segments. German large and medium-sized companies primarily seem to use separate CSR reports as perception management tools both under conditions of voluntary and mandatory reporting. Under mandatory reporting requirements, Danish large companies show less indication to do so and medium-sized Danish companies seem to be motivated by the desire to send credible signals about their CSR performance. These different motives may also contribute to the observed differences in CSR report quality.

## 3. Limitations

As pointed out, the small sample size does not allow to make claims to generalisability of the findings, which are rather to be understood as indications that require further testing. Particularly, where other research found contradicting results, such as the superior quality of IRs, the positive impact of firm size on report credibility or the impact of a company's motivation to join the UNGC on the quality of its COP, more research is needed.

Observations from 2008 are treated as conditions of voluntary reporting in Denmark. However, these observations may be influenced by an anticipation effect, as legislative work on the mandatory reporting requirements had been taking place during 2008. An anticipation effect may explain the inconclusive results for the motivation of Danish companies that neither seem to send credible signals nor engage in perception

management. Perhaps in anticipation of the coming requirements, some Danish companies published SRs already in 2008, yet without assuring high information relevance and credibility.

Finally, there are some limitations in the research design that primarily draws on content analysis due to time and resource limitations. Yet, it would seem beneficial to supplement the content analysis with interviews with the authors of the reports or important decision-makers in the departments involved in the creation of the CSR reports under study in a mixed methods approach. This would allow for stronger triangulation and could yield additional insights into the motivations of companies to publish CSR information, and choices regarding format, framework and content. However, the longitudinal nature of the study would require interviews with many people, partially concerning decisions made about 10 years ago. Thus, not all interviews may yield much additional insight.

## 4. Suggestions for further research

Throughout the analysis, potential avenues for further research have been pointed out. Some are described in greater detail here.

According to a report by GRI and CSR Europe (2017), all EU member states have transposed the provisions of the EU non-financial reporting Directive into national legislation. However, these national legislations differ particularly about the legal consequences of non-compliance. While some countries' laws contain provisions on fines (e.g. German law contains fines up to 5% of total annual turnover), the laws of other countries, like Denmark do not specify any fines. This may have impacted the observations in this study, as research on Denmark has found that some Danish companies state that they understood the law to be of "soft law" character and, therefore, did not fully comply immediately (Pedersen *et al.*, 2013). Further, the lack of sanctions for non-compliance and lacking specificity of mandatory CSR reporting legislation have been found to impact compliance levels (Chauvey *et al.*, 2015). Thus, future research could investigate how fines in CSR reporting laws (and their enforcement) impact compliance with mandatory reporting requirements and the level of overall CSR report quality.

It was argued that variations in the use of language in CSR communications may indicate differences in national culture. Further research could in a data-driven approach investigate whether there are other indications for systematic difference in the use of specific terms in the CSR reports of companies of different size, sector or from different countries. Examples could be whether the use of terms such as "sustainability", "triple bottom line", "corporate social responsibility" or "shared value" differs across CSR reports from different companies, whether the use of these terms given their context indicates evidence of a different

approach to CSR rooted in cultural differences between the countries under study, and how this affects CSR report quality.

Further, as mentioned above, future research could investigate the impact of a company's motivation to register for the UNGC on the quality of its COP or whether this may be rooted in other country of origin factors, such as differences in stakeholder expectations across countries. The impact of differences in ownership structure was only briefly discussed above. Further research could contribute with deeper insight into how e.g. foundation majority owners affect CSR report quality or if/how social investors can exert pressure to improve a company's CSR report quality.

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# Appendix

## Appendix 1: Description of Danish and German CSR reporting regulation before 2017

The Danish law on CSR reporting gradually evolved from a "comply or state non-compliance" principle in 2009 to "comply or explain non-compliance" principle in 2016.

Effective from 2009, § 99 a was added to the Danish Financial Statements Act and for the first time introduced rules on CSR reporting in Denmark. This was part of the Danish government's 2008 national action plan for CSR that was aimed at enhancing business-driven CSR (Pedersen et al., 2013). It emphasises a link between CSR and competitive advantage for companies but also to internationally promote Denmark as being characterised by responsible growth (Pedersen et al., 2013).

This change in laws made it mandatory for large Danish businesses to include information on CSR in their annual report. Companies had to report on their policies, actions and results in the topic areas of human rights, social impact, environmental impact and climate change as well as measures against corruption in their business strategy and conduct (Act no. 1403 of December 27, 2008 § 1(1)). The scope of the law covered (private and listed) companies in accounting class D, which are companies that are listed on an EU/EEA member state's stock exchange and state-owned public limited companies. Companies in accounting class C had to report if they exceeded at least two of the following criteria: total assets or liabilities of €19.2 mio, net revenue of € 38.3 mio, an average of 250 full-time employees. To comply with the law, companies had to either report in the way described by the law or include a clear statement that it did not have any CSR policies in place. This means that it from 2009 onwards, companies falling under the scope of the new § 99a of the Danish Financial Statements Act were legally required to make a statement about their CSR efforts, but reporting on CSR policies, actions and outcomes was nevertheless voluntary (Pedersen et al., 2013).

Effective from 2013, § 99 a was amended so that it became mandatory to disclose policies on human rights and environmental policies. This means that from 2013 onwards, if a company had any policies concerning the environment or human rights, it could no longer opt to make a statement to not disclose any information, but instead had to fully disclose according to the requirements set forth above. So, hypothetically, until 2013, a company that for example had policies on human rights or environmental policies in place, but did not measure the outcomes, could comply with the law by stating that it did not have any policies in place to avoid having to report fully on policies, action and outcomes in all the mentioned areas. The change of law in 2013 would then force the company to report on the existing policies and on top, put in place policies in the areas of anti-corruption and social impact and report on its actions and outcomes in all four areas.

The next significant change to Danish law took effect in 2016 when the EU non-financial reporting directive was transposed into Danish national law.

Before the EU non-financial reporting directive was transposed into national legislation Germany did not have any specific regulation on CSR reporting, which means that non-financial disclosure was voluntary in Germany before it became mandatory for PIEs in 2017.

## Appendix 2: Results of second coding frame capturing the frequency and context of the use of the term “corporate citizen(ship)” and variations thereof

**Frequency and context of "corporate citizenship" reference**

| | 2008 | | 2011 | | 2014 | | 2017 | |
|---|---|---|---|---|---|---|---|---|
| **Context of mentioning the term** | *GER* | *DK* | *GER* | *DK* | *GER* | *DK* | *GER* | *DK* |
| Community involvement | 2 | | 5 | 1 | 3 | 1 | 3 | 1 |
| Philanthropy | 5 | | 7 | | 2 | | 3 | |
| Tax contributions | 1 | | | | | | | 1 |
| Political influence | | | | | 1 | 1 | | |
| Generic | 4 | 1 | 6 | 1 | 2 | | 3 | 1 |
| Values | | 1 | | 1 | | | | |
| Human Rights | | | | | | 1 | 1 | |
| Environment | | | | | | 1 | | 1 |
| Neighbourhood and local community/generic society reference | 2 | | 3 | | 3 | | 4 | |
| Employees | 1 | | 1 | | 1 | | 1 | |
| Governance | 2 | | 2 | | 2 | | 2 | |
| **TOTAL frequency*** | **44** | **4** | **67** | **11** | **81** | **12** | **59** | **7** |
| **#reports**** | **7** | **2** | **11** | **2** | **7** | **3** | **8** | **3** |

*how many times in total the term was mentioned in all the reports

**total number of individual reports mentioning the term at least once

| **Category** | **Definition** |
|---|---|
| Community involvement | Mentioning corporate citizenship in the context of activities going beyond philanthropy and donations (monetary or in kind) – activities that are covered in the quality score coding frame |
| Philanthropy | Mentioning corporate citizenship in the context of donations (monetary or in kind) – not captured in the quality score coding frame |
| Tax contributions | Corporate citizenship as responsible tax contribution, e.g. paying a "fair share of taxes" |
| Political influence | Responsible and respectful contact or interaction with government and state institutions, in particular with regards to lobbying |
| Generic | general reference to CSR efforts/policies/strategies |
| Values | mentioning corporate citizenship as part of the corporate values |
| Human Rights | Corporate citizenship understood as respecting human rights |
| Environment | Corporate citizenship understood as respectful treatment of the environment, e.g. mentioning in the context of spills and negative environmental externalities |
| Neighbourhood and local community/generic society reference | reference to the physical neighbours of the company, the company as a neighbour in the community; interaction with the people living close to the company's facilities |

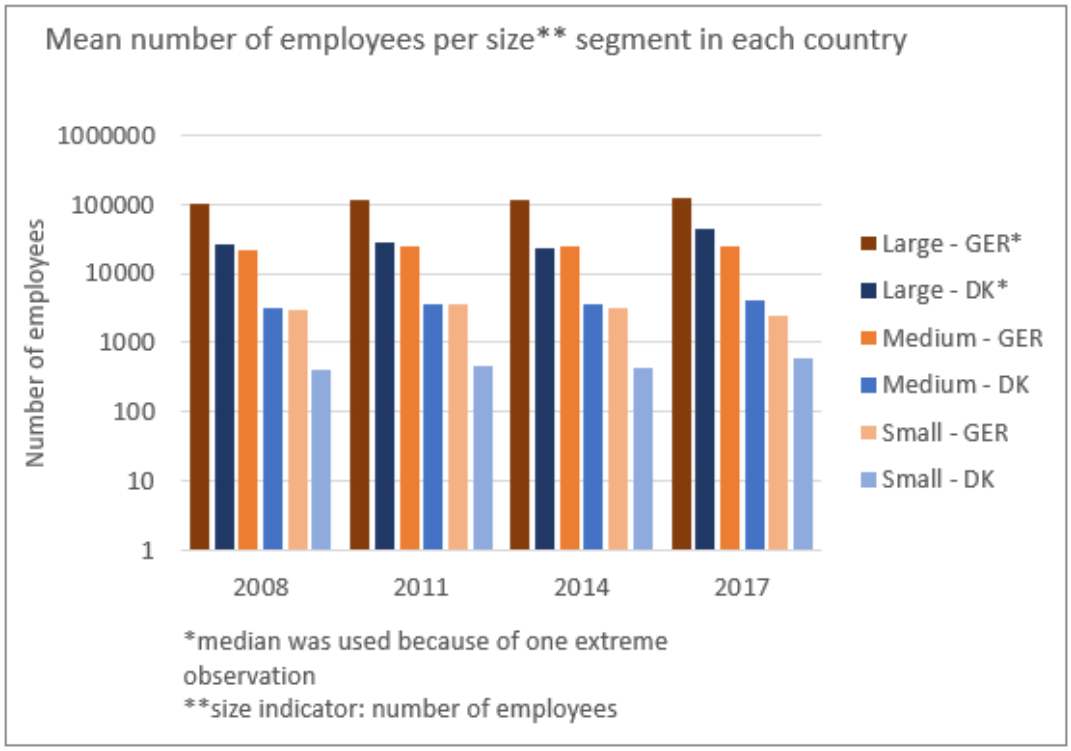
| | |
|---|---|
| Employees | corporate citizenship understood as respectful treatment of the firm's employees |
| Governance | mentioning that CC impacts the business practices and governance processes |

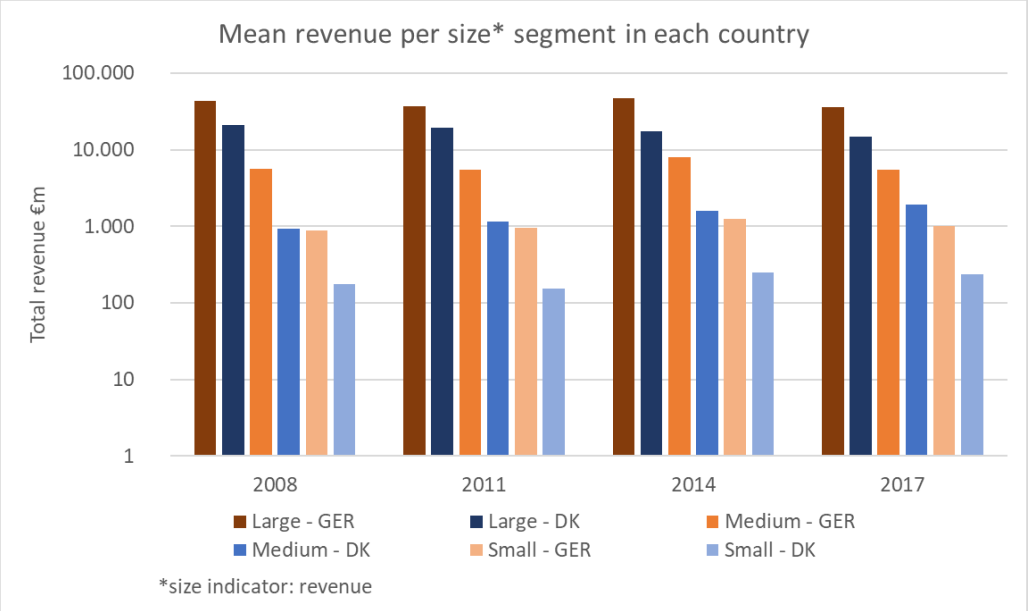
## Appendix 3: List of sample companies

| **Company** | **Country** | **Sector** |
|---|---|---|
| Aareal Bank Group | GER | Bank |
| Commerzbank | GER | Bank |
| Deutsche Bank | GER | Bank |
| Deutsche Pfandbriefbank | GER | Bank |
| Wüstenroth | GER | Bank |
| Osram | GER | Consumer |
| Villeroy & Boch | GER | Consumer |
| Westag & Getalit | GER | Consumer |
| BASF | GER | Pharma |
| Evonik Chemie | GER | Pharma |
| Merck | GER | Pharma |
| Stada | GER | Pharma |
| Wacker Chemie | GER | Pharma |
| Deutsche Post | GER | Transport |
| Fraport | GER | Transport |
| Hapag Lloyd | GER | Transport |
| HHLA | GER | Transport |
| Lufthansa | GER | Transport |
| VTG | GER | Transport |
| Danske Bank | DK | Bank |
| Jyske Bank | DK | Bank |
| Laan & Spar | DK | Bank |
| Spar Nord | DK | Bank |
| Sydbank | DK | Bank |
| Bang & Olufsen | DK | Consumer |
| Pandora | DK | Consumer |
| TCM Group | DK | Consumer |
| Bavarian Nordic | DK | Pharma |
| Chr Hansen | DK | Pharma |
| Genmab | DK | Pharma |
| Lundbeck | DK | Pharma |
| Novo Nordisk | DK | Pharma |
| Novozymes | DK | Pharma |
| CPH Airport | DK | Transport |

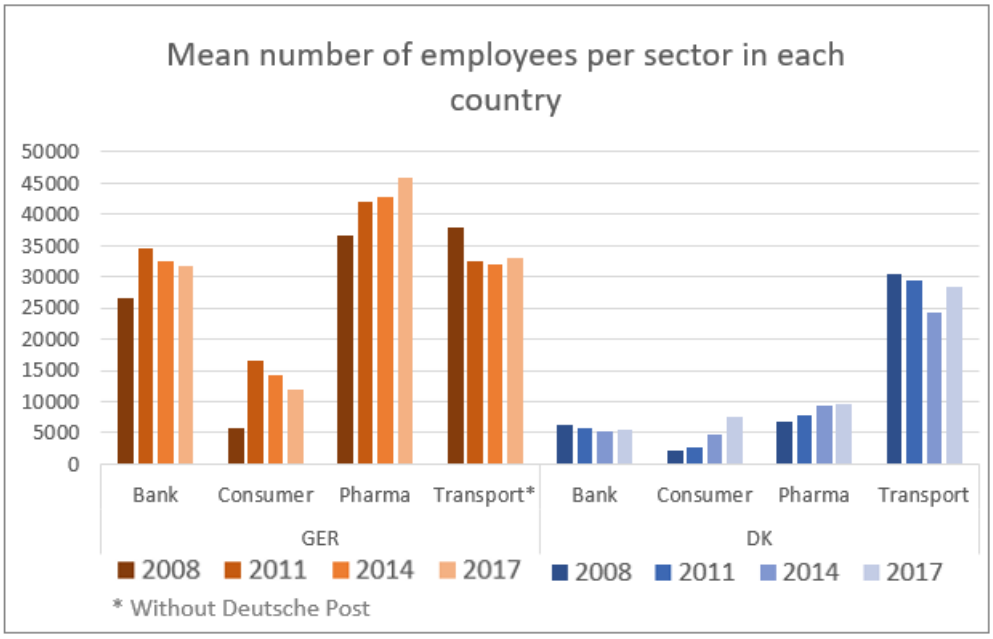
| | | |
|---|---|---|
| DFDS | DK | Transport |
| DS Norden | DK | Transport |
| DSV | DK | Transport |
| Maersk | DK | Transport |

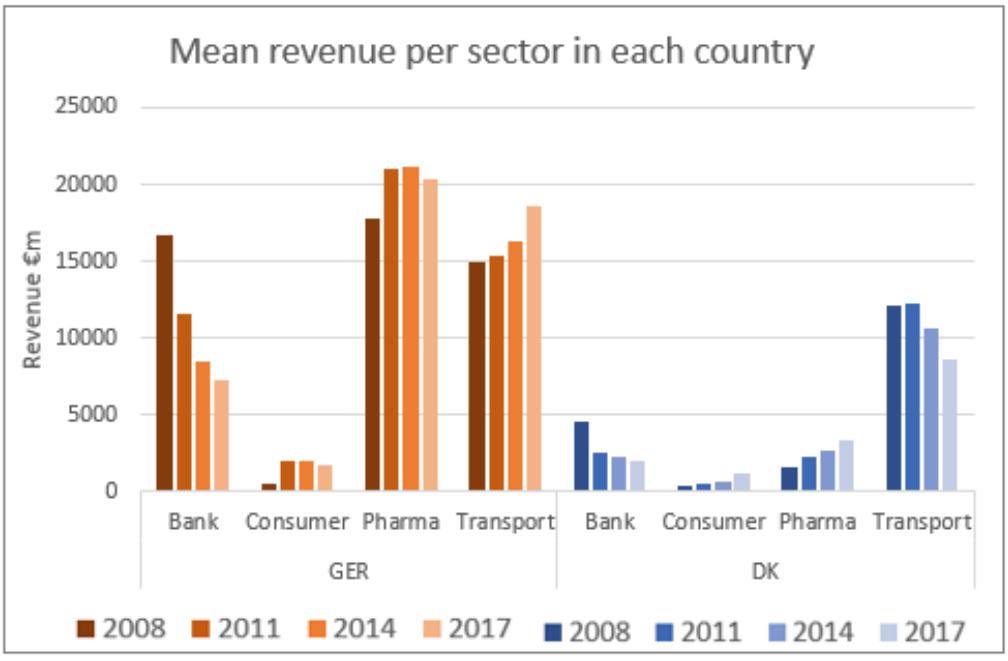
## Appendix 4: Mean number of employees and mean revenue per size segment in each country



## Appendix 5: Mean number of employees per sector in each country and Mean revenue per sector in each country



## Appendix 6: Format frequency per size segment (revenue) in both countries

| Format frequency per size* segment in both countries | | | | | |
|---|---|---|---|---|---|
| **Country - size segment** | **Format** | **2008** | **2011** | **2014** | **2017** |
| GER - Large | AR | | | | |
| | IR | 1 | 1 | 1 | 1 |
| | SR | 4 | 5 | 4 | 5 |
| GER - Medium | AR | 3 | 2 | 1 | 1 |
| | IR | | | | |
| | SR | 4 | 4 | 6 | 5 |
| GER - Small | AR | 6 | 5 | **6** | **1** |
| | IR | | | | |
| | SR | | 2 | **2** | **6** |
| DK - Large | AR | 1 | | | |
| | IR | 1 | 1 | 1 | 1 |
| | SR | 2 | 3 | 3 | 3 |
| DK - Medium | AR | **6** | **1** | | |
| | IR | 1 | 1 | 1 | 2 |
| | SR | **2** | **7** | 6 | 6 |
| DK - Small | AR | 5 | 2 | 1 | |
| | IR | | | 1 | |
| | SR | | **4** | 6 | 7 |

*size indicator: revenue

The highlighted fields in the table indicate that the change from AR to SR in 2017 was mostly driven by changes in the small segment in the German sub-sample. In the Danish sub-sample, the change from AR to SR in 2011 mostly occurred in the medium-sized segment, but also in the small segment.

## Attachment 1: Coding Frame

| Content Measures | | | | | |
|---|---|---|---|---|---|
| | **Indicators** | **Sub-indicators/Definition** | | **Further definition or examples/Scoring decision aid** | **score** | **max. score** |
| **Disclosure** | | | | | | |
| | **1. Environmental impact** | 1.1 | Input: consumption of water, energy, materials/resources used for production, heating; environmental impact of the company's buildings | Environmental inputs used by the firm for business conduct, also the eco-friendliness of facilities, using sustainable energy and/or heating solutions, etc. | 0-4+1 | 5 |
| | | 1.2 | Output: emissions, waste management, recycling, noise | Environmental outputs, the handling of negative externalities, physical and non-physical (like noise and smells, etc) | 0-4+1 | 5 |
| | | 1.3 | Environmental certification, e.g. ISO 14001, ISO 50001 or relevant industry certifications that require audits | | bonus point +1 | 1 |
| | **2. Employee matters** | 2.1 | Occupational health and safety measures: e.g. occupational accidents, diseases, fatalities, lost days, etc; both physical and mental (e.g. stress), safety training | Descriptions of the companies health and safety measures: all efforts to provide a safe work environment that does not negatively impact the employees' health and safety<br>Not: health checks or healthy food options;<br>defined negatively: anything the company does to keep the workplace save and prevent employees from getting injured or sick, e.g. safety procedues, safety training, etc; not measures that potentially increase their health and well-being | 0-4+1 | 5 |
| | | 2.2 | Equal opportunities in employment and diversity: no discrimination against minorities, women, reporting the number of men/women or a gender ratio | The company's efforts to be a work place free of discrimination; e.g. policies on diversity, diversity training, inclusion of disabled workers; mentoring programmes for women to improve gender ratio in management<br>Not: General talent programmes | 0-4+1 | 5 |
| | | 2.3 | Work life balance and benefits: such as health checks, free cantine food, social events, flex-time, parental leave regulation etc | Describing efforts to improve employees' health and well-being beyond occupational health and safety measures: positively defined as increasing employee health | 0-4+1 | 5 |
| | | 2.4 | Labour/management relations: e.g. level of unionification, employee representation on board, employee committees, staff turnover, employee satisfaction, etc | Describing the relation between management and employees at the work place | 0-4+1 | 5 |
| | | 2.5 | Certification, e.g. OHSAS18001 | | bonus point +1 | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Disclosure | **3. Business Ethics** | 3 | Describing the company's efforts to prevent, reduce and minimise unethical behaviour such as corruption and bribery | E.g. policies on preventing corruption and bribery, training the workforce on business ethics, risk assessments, reporting on the number of employees that were disciplined for corruption or bribery, incidents of corruption or bribery, pending legal cases on corruption or bribery etc) | 0-4+1 | 5 |
| | **4. Human Rights** | 4 | Describing the company's efforts to respect and promote human rights | e.g. human rights policy, policy on e.g. forced labour, child labour and the like, training workforce on human rights, reporting on incidents of human rights violations, reporting on employees that were diciplined for human rights violations | 0-4+1 | 5 |
| | **5. Community involvement** | 5 | Describing the company's involvement and engagement with the local communities in the places where it operates or where business activity takes place | e.g. schooling for children, educational programmes for members of the local community, effect of operations on local communities, e.g. how company built infrastructure benefits the locals around the company, etc);<br>Must go beyond charity and donations (in kind or monetary); here has to be at least an element of interaction with the community; can be allowing employees to volunteer in their worktime (not just "donation in kind" due to element of interaction)<br><br>Not: if company encourages employees to volunteer in their freetime or donate (e.g. donate presents to children in need);<br>Must not benefit only the employees (this counts as 2.3.) | 0-4+1 | 5 |
| | **6. Economic impact** | 6 | Describing the company's investment and procurement practices as well as direct or indirect economic impact | e.g. laying open decision-making criteria for investment and procurement; indirect economic impact (e.g. investment in infrastructure) incl. taxes (e.g. mentioning corporate tax rate, tax planning policy, etc) | 0-4+1 | 5 |
| | **7. Supplier Management** | 7.1 | Generic: supplier CSR policies, audits - use only if 7.2-7.4 not applicable<br>Information on the company's suppliers and their CSR performance | suppliers = suppliers, contractors, business partners, vendors, etc | 0-4+1 | |
| | | 7.2 | Regarding or based on environmental criteria | see 1.1 and 1.2 | 0-4+1 | 5 |
| | | 7.3 | Regarding or based on human rights criteria | see 4 | 0-4+1 | 5 |
| | | 7.4 | Regarding or based on ethical criteria (anti-corruption, bribery, etc) | see 3 | 0-4+1 | 5 |
| | **DISCLOSURE SUB-SCORE** | | | | | **67** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Dialogue** | | | | | | |
| Dialogue | **8. Addressing relevant stakeholders of the company** | 8 | Mentioning, and/or describing the company's stakeholders | e.g. employees, customers, suppliers, sellers, other parties in the supply or value chain, governments, etc. | 0-3 | 3 |
| | **9. Stakeholder engagement** | 9 | Decription of how the different stakeholders are engaged in the process: e.g. questionaires, surveys, mailed input, etc | difference to 11. and 12.: this captures in how much detail the company describes how it interacts with its different stakeholder groups: e.g. employees via surveys; investors in road shows; customers through online questionaires; 11 and 12 capture in how much detail the communication is described | 0-3 | 3 |
| | **10. Contact point and contact details** | 10 | Information on how the company can be contacted regarding CSR input and/or feedback on the report, etc. e.g. mentioning a CSR representative or CSR committee with email adress, contact form, phone number | 1=mentioning contact info, such as phone number/email<br>2=mentioning contact info (phone number or email) and/or a contact person and/or in a prominent place (easy to find, either front page or backside)<br>3=either 1 or 2 plus a comment that encourages stakeholders to get in contact | 0-3 | 3 |
| | **11. Two-way engagement** | 11 | Description of two-way engagement: e.g. advisory panels, meetings, satisfaction surveys, town hall meetings and workshops | description of the surveys, etc, e.g. describing the questions and the response rate | 0-3 | 3 |
| | **12. Multi-way engagement** | 12 | Description of multi-way engagement: e.g. board representation, elections, joint product development projects and joint sustainability projects | description of e.g. the joint projects: who is the partner, what is done, what is the outcome | 0-3 | 3 |
| | **DIALOGUE SUB-SCORE** | | | | | **15** |
| **Development** | | | | | | |
| Development | **13. Forward-orientation** | 13 | Expressions of expectations and future-oriented context, programmes, policies and initiatives, objectives and goals | Not reporting on past incidents, activities, policies or outcomes, but future-oriented goals and targets that the company sets for itself | 0-3 | 3 |
| | **14. CSR as a long-term strategy integrated CSR strategy** | 14 | Indications in the report that CSR is a long-term strategy, e.g. concrete examples for how CSR is incorporated in the overall strategy | can also be reflected in CSR management structure, e.g. having a CSR committee that reports directly to the board indicates that CSR is an integral part of strategy | 0-3 | 3 |
| | **15. Critical reflections** | **15** | Reflecting on the (potentially adverse) effect of the policies or actions taken | e.g. how a reduction of overtime can cause financial distress to employees who are used to the extra money; that employees may perceive it as intruding in their private sphere when offered health checks | 0-3 | 3 |
| | **16. Indications of learning from stakeholder dialogue** | 16 | Explicit reference how the company has changed its behaviour/operations/codes/policies, etc as a result of stakeholder engagement or external pressure | Must be CSR specific feedback, not just a reaction e.g. to a customer satisfaction survey | 0-3 | 3 |
| | **DEVELOPMENT SUB-SCORE** | | | | | **12** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **Credibility** | | | | | |
| **Credibility** | **17. Accuracy** | 17 | Description of data collection and measurement techniques, description of bases for calculations, indicating underlying assumptions and/or estimation techniques, explanation of KPIs | | 0-3 | 3 |
| | **18. Balance** | 18 | Disclosure of negative results; "warts and all reporting" | | 0-3 | 3 |
| | **19. Clarity** | 19 | Graphical illustrations to support data, explanation of technical terms, definitions, addreviations, etc; general ease of finding information: meaningful table of content and head lines, maps, links or other aids for maneuvre the document | | 0-3 | 3 |
| | **20. Comparability** | 20 | Provision of data from at least the current and another reporting period for comparison of development, provision of benchmarks (e.g. comparison to extenal norms, other companies, internal targets, etc); use of international guidelines/protocoles/reporting standards for structuring the report | | 0-3 | 3 |
| | **21. Timeliness** | 21 | Information of the current reporting period, clear definition of the reporting period | 1= yes<br>0= no | 0-1 | 1 |
| | **22. Reliability** | 22 | External assurance of the whole report or significant parts: disclosing the external auditor and scope of external assurance, auditing statement from external auditor, standards used for conducting assurance | 1 point for each of these: name of auditor, assurance standard, assurance report published | 0-3 | 3 |
| | **CREDIBILITY SUB-SCORE** | | | | | **16** |
| | **Total all** | | | | | **110** |

## Attachment 2: Coding Sheet

| Content Measures | | Pilot | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Novo Nordisk | | | | | | | | | | Lundbeck | | | | | | | | | | Jyske Bank | | | | | | | | | | Laan & Spar | | | | | | | |
| (Sub-) Indicators | | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |
| **Disclosure** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disclosure | 1.1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | | 2 | 3 | 3 | | 4 | 4 | 3 | 3 | 2 | 2 | 3 | 3 | | | 3 | 3 | 3 | 3 | 3 | 2 | | | | |
| | 1.2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 2 | 1 | | 4 | 4 | 3 | 1 | | | | | | | | | | | | | | | | |
| | 1.3 | 1 | 1 | | | | 1 | | | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | 2.1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 4 | 3 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 1 | | | | 2 | 2 | 2 | 2 | 2 | | | 1 | 1 | |
| | 2.2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | | | | | | 2 | 2 | 2 | 2 | | | | | | | 2 | 2 | 2 | 2 | 2 | | | | | |
| | 2.3 | | | | | | | | | | | 2 | 1 | 1 | 1 | 1 | | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 2 | 2 | 2 | 2 | 2 | | | 1 | | |
| | 2.4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | | 1 | 2 | 1 | 2 | | | | 2 | 2 | 1 | 1 | 1x | | 1 | 1 | | | 1 | 1 | 1 | 1 | | | 1 | | | |
| | 2.5 | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 2 | 1 | | 1 | 1 | | | | | | | | | 1 | 1 | 1 | 1 | | | | | | |
| | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | | | | | | | | | | | | | | | | | | |
| | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | | | | | 3 | 3 | | | | 4 | 4 | 4 | 2 | 1 | 1 | 2 | | | | 1 | 1 | 1 | 1 | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | | | 2 | 2 | 2 | 2 | 2 | | 1 | | | |
| | 7.1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7.2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 2 | 2 | | | | | | | | | 1 | 1 | 1 | 1 | 1 | | | | | |
| | 7.3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| | 7.4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 3 | 2 | | | | | | | | | | | | | | | | | | | | | | |
| **DISCLOSURE SUB-SCORE** | | 36 | 36 | 35 | 35 | 35 | 36 | 35 | 35 | 36 | 36 | 25 | 24 | 21 | 21 | 20 | 19 | 26 | 15 | 12 | | 27 | 27 | 19 | 15 | 9 | 9 | 11 | 8 | | | 15 | 15 | 15 | 15 | 12 | 2 | 2 | 2 | 1 | 0 |
| **Dialogue** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dialogue | 8 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | | 2 | 2 | 1 | | | | | | | | 1 | 1 | 1 | 1 | | | | | | |
| | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | 2 | 2 | 1 | 2 | 1 | 1 | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 10 | | | | | | | | | | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | 2 | 2 | 2 | 2 | 1 | | | 1 | | | | | | 1 | | | | 2 | | | | | | | | | | | | | | | | | | |
| | 12 | | | | | 1 | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | | | | | | | | | |
| **DIALOGUE SUB-SCORE** | | 3 | 3 | 3 | 3 | 3 | 6 | 5 | 5 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 4 | 6 | 5 | | 7 | 11 | 4 | 2 | 1 | 1 | 0 | 0 | | | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 |
| **Development** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development | 13 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 1 | 1 | | | | | |
| | 14 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 2 | 2 | 1 | 1 | | | | | | | 1 | 1 | 1 | 1 | 1 | | | | | |
| | **15** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | 1 | | | | | | | | | | | | | | 1 | 1 | 1 | | | | | | | |
| **DEVELOPMENT SUB-SCORE** | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 4 | 3 | | 4 | 4 | 3 | 2 | 1 | 1 | 1 | 0 | | | 3 | 3 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| **Credibility** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Credibility | 17 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | | | | 1 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | | | | | | | | | | | |
| | 18 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 1 | | | | | | | 1 | 1 | | | | 1 | | | 1 | 1 | | | | | |
| | 19 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | 2 | 2 | 2 | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 20 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | | | | | | | | | 2 | 2 | 2 | 2 | 1 | | | | | |
| | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 22 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | | | | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | |
| **CREDIBILITY SUB-SCORE** | | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 10 | 10 | 7 | 6 | 7 | 8 | 9 | 8 | 6 | | 6 | 6 | 3 | 1 | 1 | 2 | 2 | 1 | | | 5 | 4 | 4 | 5 | 4 | 2 | 2 | 2 | 2 | 2 |
| **Total Quality Score** | | 60 | 60 | 59 | 59 | 59 | 63 | 61 | 61 | 61 | 60 | 41 | 41 | 34 | 33 | 35 | 35 | 44 | 33 | 26 | 0 | 44 | 48 | 29 | 20 | 12 | 13 | 14 | 9 | 0 | 0 | 25 | 24 | 24 | 24 | 19 | 5 | 5 | 4 | 3 | 2 |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| Content Measures | | Pilot | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | DFDS | | | | | | | | | | DSV | | | | | | | | | | Pandora | | | | | | | | | | Bang & Olufsen | | | | | | | | | |
| (Sub-) Indicators | | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 |
| **Disclosure** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disclosure | 1.1 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 1 | 1 | 4 | 4 | 4 | 4 | 4 | 3 | 2 | | 1 | | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | |
| | 1.2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 4 | 4 | 4 | 4 | 4 | 3 | 2 | 1 | | | 1 | 1 | 1 | 3 | 3 | 3 | 2 | 1 | 1 | |
| | 1.3 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2.1 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 |
| | 2.2 | 3 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | | | 2 | 2 | 2 | 2 | 2 | 2 | | | | | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 2.3 | | | | | | | | | | | | | | | | | | | | | 5 | 5 | 5 | 5 | 5 | 2 | 2 | 2 | 1 | | | | | | | | | | | |
| | 2.4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2.5 | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 3 | 1 | 2 | | | | | | | | | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | | | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | |
| | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 3 | | | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1x | |
| | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | | | 2 | 1 | | | | | | | | | 3 | | | | | | | | | | 1 | | | | | | | | | |
| | 6 | | | | | | | | | | | 1 | 3 | 3 | 3 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7.1 | | | | | | | | | | | | | | | | | | | | | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | | | | | | | | | | 1 | 1 | |
| | 7.2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | | | | | | | | | | | | | | | | | | | | 1 | | |
| | 7.3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 7.4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | | | | | | | | | | | | | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| **DISCLOSURE SUB-SCORE** | | 26 | 26 | 24 | 23 | 23 | 22 | 21 | 9 | 10 | 8 | 32 | 33 | 30 | 32 | 31 | 29 | 23 | 19 | 8 | 7 | 35 | 31 | 31 | 32 | 29 | 22 | 21 | 17 | 5 | 0 | 17 | 18 | 16 | 17 | 17 | 17 | 15 | 14 | 13 | 5 |
| **Dialogue** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dialogue | 8 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | 1 | 1 | | | 1 | | | | | | | | | | | | |
| | 9 | | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| | 10 | 1 | 1 | 1 | 1 | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | | 2 | | | | | | | | | |
| | 11 | | 1 | 1 | 1 | 2 | 2 | 1 | | | | | | 2 | | | | | | | | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | 2 | 2 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| **DIALOGUE SUB-SCORE** | | 3 | 8 | 8 | 8 | 8 | 8 | 7 | 0 | 0 | 0 | 4 | 4 | 4 | 2 | 2 | 3 | 2 | 2 | 0 | 0 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Development** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development | 13 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | | | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | 1 | |
| | 14 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 1 | | | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | | | | | | | | | | | | |
| | **15** | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | | | |
| | 16 | | | | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | | | | | | | 1 | 1 | 1 | | | | | | | | | | | | |
| **DEVELOPMENT SUB-SCORE** | | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 1 | 2 | 2 | 8 | 8 | 6 | 6 | 6 | 6 | 6 | 2 | 1 | 1 | 4 | 4 | 5 | 5 | 4 | 5 | 6 | 5 | 0 | 0 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 0 |
| **Credibility** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Credibility | 17 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 1 | 1 | | |
| | 18 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | | | | | | | 1 | | 1 | | | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | |
| | 19 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | | | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 20 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | | | | | | | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | |
| | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 22 | | | | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **CREDIBILITY SUB-SCORE** | | 9 | 10 | 10 | 10 | 9 | 7 | 8 | 5 | 4 | 4 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 6 | 4 | 3 | 8 | 8 | 8 | 8 | 6 | 7 | 5 | 6 | 2 | | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 5 | 2 |
| **Total Quality Score** | | **43** | **49** | **47** | **46** | **45** | **43** | **42** | **15** | **16** | **14** | **54** | **55** | **50** | **50** | **49** | **48** | **38** | **29** | **13** | **11** | **50** | **46** | **47** | **49** | **42** | **36** | **34** | **31** | **9** | **0** | **28** | **27** | **25** | **25** | **25** | **24** | **23** | **20** | **19** | **7** |



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| Content Measures | | DK_Pharma | | | | | | | | | | | | | | | | GER_Pharma | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Novozymes | | | | Chr Hansen | | | | Bavarian Nordic | | | | Genmab | | | | Merck | | | | Evonik | | | | Wacker Chemie | | | | BASF | | | | Stada | | | |
| (Sub-) Indicators | | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 |
| **Disclosure** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disclosure | 1.1 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 1 | 2 | 1 | | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 2 | 3 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | | | | |
| | 1.2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 1 | 1 | 1 | | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 5 | 5 | 4 | 5 | 5 | 4 | 4 | | | | |
| | 1.3 | | | | | 1 | | 1 | | | | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | |
| | 2.1 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 1 | | 4 | 4 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 4 | 4 | 3 | 5 | 5 | 4 | 4 | 1 | | | |
| | 2.2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | | 2 | 2 | 1x | | 2 | 2 | | | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | | | |
| | 2.3 | | | | | | | | | | | | | 1 | 1 | 1 | | 4 | 3 | 1 | 3 | 3 | 3 | 3 | 2 | 1 | 4 | 4 | 3 | 2 | 2 | 3 | 3 | | | | |
| | 2.4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 | 2 | | | 3 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 3 | 3 | 1 | 2 | 2 | 3 | 3 | 1 | | | |
| | 2.5 | | | | | | | 1 | | | | | | | | | | 1 | 1 | | | | | | | 1 | 1 | | | 1 | 1 | 1 | 1 | | | | |
| | 3 | 3 | 3 | 2 | | 2 | 1 | 2 | | 1 | 1 | 2 | | 1 | 1 | 1 | | 4 | 4 | 4 | 2 | 3 | 3 | 3 | 2 | 2 | 4 | 3 | 1 | 4 | 4 | 3 | 3 | | | | |
| | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | | | | | | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 2 | 2 | 1 | | | |
| | 5 | 1 | 1 | | | | | | | | | | | | | | | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | | 1 | 1 | | 3 | 3 | 3 | 3 | | | | |
| | 6 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7.1 | 1 | 2 | 2 | | | | | | 1 | 1 | | | | 1 | | | 4 | 4 | | | | | | 1 | | | | | | | | | | | | |
| | 7.2 | | | | | | 1 | 1 | | | | 1 | | | | | | | | 1 | 1 | 2 | 1 | 2 | | 1 | x | 1 | | 1 | 3 | 4 | 3 | 1 | | | |
| | 7.3 | | | | | 1 | 1 | | | | | 1 | | | | | | | | 1 | 1 | 2 | 1 | 2 | | | | | | 1 | 3 | 4 | 4 | 1 | | | |
| | 7.4 | | | | | 1 | 1 | | | | | 1 | | | | | | | | 1 | 1 | 2 | 1 | 2 | | | | | | | | 4 | 3 | 1 | | | |
| **DISCLOSURE SUB-SCORE** | | 19 | 20 | 15 | 11 | 18 | 17 | 17 | 10 | 15 | 14 | 15 | 0 | 10 | 12 | 7 | 0 | 37 | 38 | 31 | 28 | 32 | 30 | 28 | 19 | 20 | 32 | 31 | 20 | 36 | 40 | 44 | 42 | 9 | 0 | 0 | 0 |
| **Dialogue** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dialogue | 8 | | 1 | | | | 1 | 1 | | | | | | | | | | 3 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | |
| | 9 | | | | | | | | | | 1 | | | | 1 | | | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 1 | 1 | 3 | 3 | 2 | 2 | 2 | | | | | | |
| | 10 | 2 | 2 | 2 | 2 | | | | | 2 | 2 | 2 | | | | | | 3 | 3 | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | |
| | 11 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | | 1 | | | 2 | 2 | | | | | | |
| | 12 | | 1 | 1 | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| **DIALOGUE SUB-SCORE** | | 3 | 5 | 4 | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 2 | 0 | 1 | 2 | 1 | 0 | 9 | 11 | 7 | 7 | 6 | 6 | 7 | 5 | 4 | 7 | 6 | 5 | 7 | 7 | 2 | 2 | 0 | 0 | 0 | 0 |
| **Development** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development | 13 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | | 2 | 2 | 2 | | | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | | | |
| | 14 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | | 1 | | 1 | | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | | | | |
| | **15** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | | | | 1 | 1 | | | | | 1 | | | | | | 1 | 1 | | | | | | |
| **DEVELOPMENT SUB-SCORE** | | 4 | 4 | 4 | 2 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 0 | 3 | 2 | 3 | 0 | 3 | 5 | 4 | 4 | 4 | 4 | 5 | 4 | 3 | 3 | 5 | 5 | 6 | 6 | 5 | 5 | 1 | 0 | 0 | 0 |
| **Credibility** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Credibility | 17 | 3 | 2 | 3 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 2 | | | | | | 3 | 3 | 2 | 2 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | |
| | 18 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | | | 1 | | | | | | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | | 2 | 2 | 2 | 2 | 1 | 2 | 1 | | | | |
| | 19 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | | 1 | 1 | | | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | | | |
| | 20 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | | | 1 | 1 | | | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | |
| | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| | 22 | 3 | 3 | 3 | 3 | | | | | 3 | 3 | 3 | | | | | | 2 | 3 | 3 | | 3 | 3 | 3 | 3 | | | | | 3 | 3 | 3 | 3 | 3 | | | |
| **CREDIBILITY SUB-SCORE** | | 15 | 12 | 12 | 11 | 11 | 11 | 11 | 8 | 11 | 11 | 9 | 0 | 3 | 3 | 1 | 0 | 13 | 15 | 14 | 8 | 15 | 13 | 12 | 11 | 6 | 11 | 11 | 11 | 14 | 13 | 14 | 13 | 4 | 0 | 0 | 0 |
| **Total Quality Score** | | **41** | **41** | **35** | **26** | **34** | **34** | **34** | **22** | **31** | **32** | **29** | **0** | **17** | **19** | **12** | **0** | **62** | **69** | **56** | **47** | **57** | **53** | **52** | **39** | **33** | **53** | **53** | **41** | **63** | **66** | **65** | **62** | **14** | **0** | **0** | **0** |



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| Content Measures | | DK_Transport | | | | | | | | | | | | GER_Transport | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Maersk | | | | DS Norden | | | | CPH Airport | | | | Hapag Lloyd | | | | VTG | | | | HHLA | | | | Deutsche Post | | | | Fraport | | | | Lufthansa | | | |
| (Sub-) Indicators | | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 10 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 |
| **Disclosure** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disclosure | 1.1 | 4 | 3 | 5 | 3 | 4 | 4 | 3 | | 3 | 3 | 4 | | 3 | 2 | 1 | 1 | 1 | | | | 3 | 3 | 3 | | 4 | 4 | 4 | 3 | 3 | 5 | 5 | 4 | 5 | 5 | 5 | 4 |
| | 1.2 | 5 | 3 | 5 | 4 | 4 | 4 | 3 | 2 | 3 | 4 | 4 | | 4 | 1 | 3 | 2 | | | | | 4 | 3 | 3 | 1 | 4 | 4 | 4 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 4 | 5 |
| | 1.3 | | 1 | 1 | 1 | | | | | | | | | 1 | 1 | 1 | 1 | | | | | | 1 | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2.1 | 3 | 3 | 5 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 1 | 3 | | 1 | 1 | 1 | | | 1 | 2 | 2 | 2 | | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 4 | 2 | 2 | 3 | 3 |
| | 2.2 | 2 | 2 | 3 | | 2 | 2 | 2 | | 2 | 2 | 2 | | 3 | | 1 | | | | | | 1 | 2 | 2 | | 3 | 4 | 3 | 2 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 |
| | 2.3 | 2 | | | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | | | | 1 | | | | 3 | 1 | | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 4 | 2 | 3 | 2 | 3 |
| | 2.4 | | 2 | 2 | | 2 | 2 | 2 | | 2 | 2 | 2 | | 1 | | | | 1 | | | | 1 | 1 | 1 | | 2 | 3 | 2 | | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 1 |
| | 2.5 | | | | 1 | | | | | | | | | 1 | | | | | | | | | | | | 1 | 1 | 1 | | | | | | 1 | 1 | 1 | 1 |
| | 3 | 3 | 2 | 3 | | 2 | 2 | 2 | | 2 | 1 | 1 | | 1 | | | | 1 | | | | 2 | 1 | 1 | 1 | 3 | 3 | 2 | 1 | 3 | 2 | 1 | 2 | 2 | 2 | 1 | 1 |
| | 4 | 2 | 1 | 2 | | 2 | 1 | 1 | | 1 | 1 | 1 | | 1 | | | | 1 | | | | 1 | | | | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 |
| | 5 | 2 | 3 | 2 | | | 2 | | | | | | | 2 | | | | 1 | | | | | 1 | 1 | | 3 | 3 | 4 | 3 | | | | | 3 | 3 | 3 | 3 |
| | 6 | 2 | 2 | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7.1 | 1 | | | | 1 | 1 | 1 | | 1 | 1 | 1 | | | | | | | | | | | | | | | 2 | 1 | | | | 2 | | | | 1 | |
| | 7.2 | | 2 | 1 | 1 | | | | | | | | | 2 | | | | | | | 1 | | | | | 1 | | | 1 | | | | 1 | 1 | | |
| | 7.3 | | 2 | 1 | | | | | | | | | | 1 | | | | | | | | | | | | 2 | | | 1 | 1 | 1 | | | 1 | 1 | | |
| | 7.4 | | 2 | 1 | | | | | | | | | | 1 | | | | | | | | 1 | | | | 2 | | | 1 | | | | | 1 | | | |
| **DISCLOSURE SUB-SCORE** | | 26 | 28 | 31 | 14 | 22 | 23 | 19 | 5 | 18 | 20 | 20 | 2 | 26 | 4 | 7 | 5 | 7 | 0 | 0 | 2 | 18 | 15 | 13 | 4 | 34 | 32 | 28 | 21 | 25 | 27 | 26 | 26 | 31 | 30 | 29 | 27 |
| **Dialogue** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dialogue | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | 1 | 1 | 1 | | 1 | | | | | | | | 1 | 1 | 1 | | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | | 3 | 3 | 2 |
| | 9 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 2 | | | | | | | | 2 | 1 | | | 2 | 3 | 1 | 1 | 2 | 2 | 2 | 1 | 3 | 2 | 2 | 3 |
| | 10 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | | 2 | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | | 1 | 2 |
| | 11 | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | | 2 | | | | 1 | | | | | | | | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 |
| | 12 | 3 | 1 | 1 | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **DIALOGUE SUB-SCORE** | | 10 | 8 | 8 | 6 | 5 | 5 | 7 | 0 | 5 | 5 | 5 | 1 | 7 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 5 | 4 | 3 | 2 | 8 | 8 | 7 | 5 | 8 | 8 | 7 | 5 | 6 | 7 | 8 | 10 |
| **Development** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development | 13 | 2 | 2 | 3 | 2 | 3 | 3 | 2 | | 2 | 2 | 2 | | | | | | | | | | | | 1 | 1 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 14 | 3 | 2 | 3 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | | 2 | | | | | | | | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 |
| | 15 | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 16 | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 | | | | | | | | 1 |
| **DEVELOPMENT SUB-SCORE** | | 5 | 4 | 8 | 3 | 5 | 6 | 4 | 1 | 3 | 3 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 2 | 4 | 4 | 5 | 7 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 |
| **Credibility** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Credibility | 17 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 3 | 3 | 2 | | 1 | | | | | | | | 2 | 2 | 1 | 1 | 3 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 18 | 3 | 3 | 2 | 2 | 2 | 1 | 1 | | 1 | 1 | 1 | | | | | | | | | | 1 | 1 | 1 | | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | | | 1 | 1 |
| | 19 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 1 | 3 | 2 | 2 | | 1 | | | | | | | | 2 | 2 | 1 | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 20 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | | 3 | 3 | 3 | | 1 | 1 | | | | | | | 2 | 2 | 1 | | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 22 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 | 3 | | 3 | | | | 3 | | | | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | | | | | 3 |
| **CREDIBILITY SUB-SCORE** | | 14 | 14 | 13 | 11 | 15 | 14 | 10 | 3 | 14 | 13 | 12 | 1 | 7 | 2 | 1 | 1 | 4 | 1 | 1 | 1 | 11 | 11 | 8 | 5 | 15 | 15 | 12 | 11 | 14 | 13 | 12 | 10 | 9 | 9 | 10 | 13 |
| **Total Quality Score** | | **55** | **54** | **60** | **34** | **47** | **48** | **40** | **9** | **40** | **41** | **40** | **4** | **42** | **8** | **10** | **8** | **14** | **3** | **3** | **5** | **36** | **32** | **27** | **13** | **61** | **59** | **52** | **44** | **51** | **52** | **49** | **45** | **50** | **49** | **50** | **54** |



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| Content Measures | | DK_Bank | | | | | | | | | | | | GER_Bank | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Danske Bank | | | | Spar Nord | | | | Sydbank | | | | Wüstenroth & | | | | Deutsche | | | | Aareal | | | | Commerzbank | | | | Deutsche Bank | | | |
| (Sub-) Indicators | | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 12 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 |
| **Disclosure** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Disclosure | 1.1 | 3 | 3 | 3 | 3 | 2 | | | | 3 | 1 | | | 4 | 3 | 3 | | 1 | 1 | | | 1 | 3 | 3 | | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 3 |
| | 1.2 | 3 | 3 | 3 | 3 | 3 | | | | 2 | | | | 3 | 3 | 3 | | 1 | 1 | | | 1 | 2 | 2 | | 4 | 4 | 4 | 4 | 2 | 2 | 2 | 2 |
| | 1.3 | 1 | | | | | | | | | | | | | | | | 1 | | | | | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 |
| | 2.1 | 2 | 2 | 3 | 2 | 2 | | | | 2 | | 1 | 1 | 2 | 2 | 2 | | 1 | | | | | 2 | 2 | | 3 | 3 | 2 | 2 | | | 1 | 2 |
| | 2.2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | | 2 | 2 | | | 3 | 3 | 3 | | 1 | 1 | | | 1 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 2 |
| | 2.3 | | | 2 | 3 | 2 | | | | 1 | | | | 3 | 4 | 3 | | 3 | | | | 1 | 4 | 3 | | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 2 |
| | 2.4 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | | 2 | | | | | 1 | 1 | | 2 | | | | 2 | 3 | 2 | | 3 | 3 | 2 | 2 | 2 | 3 | 1 | |
| | 2.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | |
| | 3 | 3 | 2 | 1 | 1 | 2 | | | | 1 | 1 | | | 1 | 2 | 1 | | 2 | | | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 1 |
| | 4 | 1 | 1 | 1 | 1 | | | | | 1 | | | | | | | | 1 | | | | 1 | 1 | 1 | | 1 | 2 | 2 | 1 | 3 | 2 | | |
| | 5 | 3 | 7 | 3 | 4 | 2 | 1 | | | 2 | | | | | | 1 | | | | | | | | | | 1 | 1 | 1 | 1 | 3 | 3 | 4 | 4 |
| | 6 | 2 | 2 | 1 | 1 | | | | | 3 | 2 | 1 | | | | | | | | | | 1 | 1 | 1 | | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 |
| | 7.1 | 2 | 1 | 1 | | 1 | | | | | | | | | | | | 1 | | | | 1 | 1 | 1 | | | | | | | | | |
| | 7.2 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | | | | 1 |
| | 7.3 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | 2 | | | 1 |
| | 7.4 | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | | | | |
| **DISCLOSURE SUB-SCORE** | | 24 | 25 | 22 | 22 | 19 | 3 | 3 | 0 | 19 | 6 | 2 | 1 | 16 | 18 | 17 | 0 | 14 | 3 | 0 | 0 | 10 | 22 | 20 | 2 | 29 | 29 | 29 | 25 | 25 | 25 | 16 | 21 |
| **Dialogue** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dialogue | 8 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 2 | | | | 1 | 1 | 1 | | 1 | | | | | 1 | 1 | | 2 | 2 | 2 | 2 | 1 | | 1 | 2 |
| | 9 | 2 | 1 | 1 | | | 1 | | | 1 | | | | 3 | 3 | 3 | | 1 | | | | | 1 | 1 | | 1 | 1 | 1 | 2 | 3 | 2 | 1 | 2 |
| | 10 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | | | | | 2 | 2 | 2 | | 2 | | | | 2 | 3 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 |
| | 11 | 2 | 1 | 1 | 1 | 2 | | | | 1 | | | | | 1 | 1 | | | | | | | | | | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 |
| | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **DIALOGUE SUB-SCORE** | | 6 | 4 | 4 | 3 | 5 | 4 | 3 | 3 | 4 | 0 | 0 | 0 | 6 | 7 | 7 | 0 | 4 | 0 | 0 | 0 | 2 | 5 | 4 | 0 | 6 | 6 | 6 | 7 | 8 | 5 | 6 | 8 |
| **Development** | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | |
| Development | 13 | 2 | 2 | 1 | 1 | 1 | | 1 | 1 | | 1 | | | | | | | 1 | | | | 1 | 2 | 2 | | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 3 |
| | 14 | 1 | 1 | 2 | 2 | 1 | | | | | | | | 1 | 1 | | | 1 | | | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 15 | | | 3 | 1 | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | |
| | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| **DEVELOPMENT SUB-SCORE** | | 3 | 3 | 6 | 4 | 2 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 5 | 3 | 0 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | 5 |
| **Credibility** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Credibility | 17 | 1 | 1 | 1 | | | | | | 1 | | | | | 1 | 1 | | | | | | | 2 | 1 | | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 |
| | 18 | 1 | 1 | 1 | 1 | 1 | | | | 1 | 1 | 1 | | | 1 | 1 | | | | | | | 1 | | | 1 | 1 | 1 | 1 | | | 2 | 1 |
| | 19 | 2 | 2 | 2 | 2 | 2 | | | 1 | 2 | | | | 2 | 1 | 1 | | 1 | | | | 3 | 3 | 3 | | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 |
| | 20 | 2 | 2 | 2 | 2 | 2 | | | 1 | 2 | | | | 1 | 1 | 1 | | | | | | 2 | 3 | 3 | | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| | 21 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 22 | 3 | 3 | | | | 2 | 2 | 2 | | | | 2 | 3 | | | | 2 | | | | 3 | | | | 2 | 2 | 2 | | 3 | 2 | 3 | 2 |
| **CREDIBILITY SUB-SCORE** | | 10 | 10 | 7 | 6 | 6 | 3 | 3 | 5 | 7 | 2 | 2 | 3 | 7 | 5 | 5 | 0 | 4 | 1 | 0 | 0 | 9 | 10 | 8 | 1 | 11 | 11 | 12 | 10 | 10 | 8 | 11 | 10 |
| **Total Quality Score** | | **43** | **42** | **39** | **35** | **32** | **10** | **10** | **9** | **30** | **9** | **4** | **4** | **30** | **31** | **29** | **0** | **24** | **4** | **0** | **0** | **23** | **42** | **35** | **3** | **48** | **48** | **50** | **45** | **45** | **40** | **36** | **44** |



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| Content Measures | | DK_Consumer | | | | GER_Consumer | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | TCM Group | | | | Villeroy & Boch | | | | Osram Lights | | | | Westag Getalit | | | |
| (Sub-) Indicators | | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 | 17 | 14 | 11 | 8 |
| **Disclosure** | | | | | | | | | | | | | | | | | |
| Disclosure | 1.1 | 2 | 2 | 2 | | 3 | | 2 | | 3 | 3 | | | 2 | | | |
| | 1.2 | 1 | 2 | 2 | | 3 | 2 | 2 | | 3 | 2 | | | 2 | | | |
| | 1.3 | | | | | 1 | 1 | 1 | | 1 | 1 | | | 1 | | | |
| | 2.1 | 2 | 2 | 2 | | 2 | 1 | 1 | | 2 | 1 | | | 3 | 1 | | |
| | 2.2 | | | | | 1 | | | | 2 | 1 | | | 2 | 1 | | |
| | 2.3 | 1 | 1 | 1 | | 2 | 1 | 1 | | 1 | | | | 1 | | | |
| | 2.4 | | | | | | | | | 2 | | | | 1 | | | |
| | 2.5 | | | | | 1 | 1 | | | 1 | 1 | | | | | | |
| | 3 | 1 | 1 | 1 | | 2 | 1 | 1 | | 2 | 2 | | | | | | |
| | 4 | 1 | 1 | 1 | | 1 | | | | 1 | 1 | | | 1 | | | |
| | 5 | | | | | | | | | 1 | 1 | | | | | | |
| | 6 | | | | | | | | | | | | | | | | |
| | 7.1 | 1 | 1 | 1 | | | | | | | | | | | | | |
| | 7.2 | | | | | 1 | | | | 1 | 1 | | | 1 | | | |
| | 7.3 | | | | | 1 | 1 | | | 1 | 1 | | | 1 | | | |
| | 7.4 | | | | | 1 | 1 | 1 | | 1 | | | | | | | |
| **DISCLOSURE SUB-SCORE** | | 9 | 10 | 10 | 0 | 19 | 9 | 9 | 0 | 22 | 15 | 22 | 0 | 15 | 2 | 0 | 0 |
| **Dialogue** | | | | | | | | | | | | | | | | | |
| Dialogue | 8 | | | 1 | | 1 | | | | 1 | | 1 | | | | | |
| | 9 | | | | | 1 | 1 | | | 2 | | | | | | | |
| | 10 | | | | | 2 | | | | 2 | 2 | 2 | | 2 | | | |
| | 11 | | | | | | | | | 1 | | | | | | | |
| | 12 | | | | | | | | | | 1 | | | | | | |
| **DIALOGUE SUB-SCORE** | | 0 | 0 | 1 | 0 | 4 | 1 | 0 | 0 | 6 | 3 | 3 | 0 | 2 | 0 | 0 | 0 |
| **Development** | | | | | | | | | | | | | | | | | |
| Development | 13 | | | 1 | | | 1 | 1 | | 2 | | | | | | | |
| | 14 | | | | | | | | | 1 | 1 | 1 | | | | | |
| | **15** | | | | | | | | | | | | | | | | |
| | 16 | | | | | | | | | 1 | | | | | | | |
| **DEVELOPMENT SUB-SCORE** | | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| **Credibility** | | | | | | | | | | | | | | | | | |
| Credibility | 17 | | | | | | | | | 2 | | | | | | | |
| | 18 | | | | | | | | | | | | | 1 | | | |
| | 19 | 1 | 1 | 1 | | 1 | 1 | 1 | | 2 | 1 | 1 | | 1 | | | |
| | 20 | 1 | 1 | 1 | | | | | | 2 | | | | | | | |
| | 21 | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | | 1 | 1 | | |
| | 22 | | | | | | | | | 3 | | | | | | | |
| **CREDIBILITY SUB-SCORE** | | 3 | 3 | 3 | 0 | 2 | 2 | 2 | 0 | 10 | 2 | 0 | 0 | 3 | 1 | 0 | 0 |
| **Total Quality Score** | | **12** | **13** | **15** | **0** | **25** | **13** | **12** | **0** | **42** | **21** | **26** | **0** | **20** | **3** | **0** | **0** |



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**Attachment 3: Dataset**

| # | Year | Company | Country | Sector | Revenue €m | Revenue size indicator | Employees | Employee size indicator | Report type | SR proxy: COP/GRI/ Other/Free | Pages | UNGC since | GRI reference |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2008 | Aareal Bank Group | GER | Bank | 2.002 | M | 2.482 | S | AR | | | 2012 | none |
| 2 | 2011 | Aareal Bank Group | GER | Bank | 1.166 | S | 2.295 | S | SR | COP | 60 | 2012 | Index |
| 3 | 2014 | Aareal Bank Group | GER | Bank | 1.203 | S | 2.548 | S | SR | COP | 56 | 2012 | Index |
| 4 | 2017 | Aareal Bank Group | GER | Bank | 987 | S | 2.758 | S | SR | COP | 20 | 2012 | Index |
| 5 | 2008 | Bang & Olufsen | DK | Consumer | 374 | S | 2.051 | M | AR | | | no | none |
| 6 | 2011 | Bang & Olufsen | DK | Consumer | 403 | S | 2.106 | M | SR | FREE | 12 | no | none |
| 7 | 2014 | Bang & Olufsen | DK | Consumer | 316 | S | 2.015 | M | SR | FREE | 10 | no | none |
| 8 | 2017 | Bang & Olufsen | DK | Consumer | 441 | S | 1.028 | S | SR | FREE | 22 | no | none |
| 9 | 2008 | BASF | GER | Pharma | 62.304 | L | 96.924 | L | IR | | | 2000 | Index |
| 10 | 2011 | BASF | GER | Pharma | 73.497 | L | 111.141 | L | IR | | | 2000 | Index |
| 11 | 2014 | BASF | GER | Pharma | 74.326 | L | 113.292 | L | IR | | | 2000 | Reference |
| 12 | 2017 | BASF | GER | Pharma | 64.475 | L | 115.490 | L | IR | | | 2000 | Reference |
| 13 | 2008 | Bavarian Nordic | DK | Pharma | 10 | S | 360 | S | AR | | | no | none |
| 14 | 2011 | Bavarian Nordic | DK | Pharma | 70 | S | 452 | S | SR | FREE | 24 | no | Index |
| 15 | 2014 | Bavarian Nordic | DK | Pharma | 163 | S | 437 | S | SR | FREE | 22 | no | Index |
| 16 | 2017 | Bavarian Nordic | DK | Pharma | 184 | S | 435 | S | SR | FREE | 19 | no | Reference |
| 17 | 2008 | Chr Hansen | DK | Pharma | 477 | M | 2.130 | M | SR | FREE | 12 | 2009 | none |
| 18 | 2011 | Chr Hansen | DK | Pharma | 636 | M | 2.360 | M | SR | COP | 14 | 2009 | none |
| 19 | 2014 | Chr Hansen | DK | Pharma | 756 | M | 2.605 | M | SR | COP | 18 | 2009 | none |
| 20 | 2017 | Chr Hansen | DK | Pharma | 1.063 | M | 3.111 | M | SR | COP | 19 | 2009 | none |
| 21 | 2008 | Commerzbank | GER | Bank | 21.372 | L | 39.239 | M | SR | COP/GRI | 100 | 2006 | Index |
| 22 | 2011 | Commerzbank | GER | Bank | 17.343 | L | 58.160 | L | SR | COP/GRI | 148 | 2006 | Index |
| 23 | 2014 | Commerzbank | GER | Bank | 12.555 | M | 52.103 | M | SR | COP/GRI | 38 | 2006 | report |
| 24 | 2017 | Commerzbank | GER | Bank | 8.423 | M | 49.417 | M | SR | COP/GRI | 40 | 2006 | report |
| 25 | 2008 | CPH Airport | DK | Transport | 312 | S | 1.930 | M | AR | | | 2011 | none |
| 26 | 2011 | CPH Airport | DK | Transport | 448 | M | 2.155 | M | SR | COP | 76 | 2011 | Reference |
| 27 | 2014 | CPH Airport | DK | Transport | 518 | S | 2.306 | M | IR | | | 2011 | none |
| 28 | 2017 | CPH Airport | DK | Transport | 595 | M | 2.573 | M | IR | | | 2011 | none |
| 29 | 2008 | Danske Bank | DK | Bank | 20.159 | L | 23.624 | L | SR | COP | 36 | 2007 | Reference |


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| # | Year | Company | Country | Sector | Revenue €m | Revenue size indicator | Employees | Employee size indicator | Report type | SR proxy: COP/GRI/ Other/Free | Pages | UNGC since | GRI reference |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 2011 | Danske Bank | DK | Bank | 10.833 | L | 21.320 | L | SR | COP | 46 | 2007 | Reference |
| 31 | 2014 | Danske Bank | DK | Bank | 8.974 | L | 18.478 | L | SR | COP | 32 | 2007 | Reference |
| 32 | 2017 | Danske Bank | DK | Bank | 7.840 | L | 19.768 | L | SR | COP | 36 | 2007 | none |
| 33 | 2008 | Deutsche Bank | GER | Bank | 54.549 | L | 80.456 | L | SR | COP | 111 | 2000 | Index |
| 34 | 2011 | Deutsche Bank | GER | Bank | 34.878 | L | 100.996 | L | SR | COP | 112 | 2000 | Index |
| 35 | 2014 | Deutsche Bank | GER | Bank | 25.001 | L | 98.138 | L | SR | COP | 98 | 2000 | Index |
| 36 | 2017 | Deutsche Bank | GER | Bank | 24.092 | L | 97.535 | L | SR | COP | 88 | 2000 | Reference |
| 37 | 2008 | Deutsche Pfandbriefbank | GER | Bank | 4.418 | M | 971 | S | AR | | | no | none |
| 38 | 2011 | Deutsche Pfandbriefbank | GER | Bank | 3.691 | M | 1.032 | S | AR | | | no | none |
| 39 | 2014 | Deutsche Pfandbriefbank | GER | Bank | 2.333 | S | 844 | S | AR | | | no | none |
| 40 | 2017 | Deutsche Pfandbriefbank | GER | Bank | 1.672 | S | 744 | S | SR | DNK | 27 | no | Reference |
| 41 | 2008 | Deutsche Post | GER | Transport | 54.474 | L | 456.716 | L | SR | COP | 64 | 2006 | Reference |
| 42 | 2011 | Deutsche Post | GER | Transport | 52.829 | L | 471.654 | L | SR | COP | 88 | 2006 | Index |
| 43 | 2014 | Deutsche Post | GER | Transport | 56.630 | L | 488.824 | L | SR | COP | 125 | 2006 | Reference |
| 44 | 2017 | Deutsche Post | GER | Transport | 60.444 | L | 519.544 | L | SR | COP | 112 | 2006 | Reference |
| 45 | 2008 | DFDS | DK | Transport | 1.099 | M | 4.301 | M | AR | | | 2015 | Reference |
| 46 | 2011 | DFDS | DK | Transport | 1.559 | M | 5.096 | M | SR | FREE | 17 | 2015 | none |
| 47 | 2014 | DFDS | DK | Transport | 1.713 | M | 6.400 | M | SR | FREE | 23 | 2015 | none |
| 48 | 2017 | DFDS | DK | Transport | 1.921 | M | 7.235 | M | SR | COP | 24 | 2015 | none |
| 49 | 2008 | DS Norden | DK | Transport | 1.440 | M | 628 | S | SR | COP | 20 | 2009 | none |
| 50 | 2011 | DS Norden | DK | Transport | 1.753 | M | 1.052 | S | SR | COP | 28 | 2009 | Index |
| 51 | 2014 | DS Norden | DK | Transport | 1.954 | M | 978 | S | SR | COP | 39 | 2009 | none |
| 52 | 2017 | DS Norden | DK | Transport | 3.652 | M | 995 | S | SR | COP | 40 | 2009 | Index |
| 53 | 2008 | DSV | DK | Transport | 5.019 | M | 25.056 | L | AR | | | 2009 | Index |
| 54 | 2011 | DSV | DK | Transport | 5.860 | L | 21.678 | L | SR | COP | 19 | 2009 | Index |
| 55 | 2014 | DSV | DK | Transport | 6.513 | L | 22.874 | L | SR | COP | 28 | 2009 | Index |
| 56 | 2017 | DSV | DK | Transport | 10.042 | L | 45.637 | L | SR | COP | 36 | 2009 | none |
| 57 | 2008 | Evonik Chemie | GER | Pharma | 13.076 | M | 28.681 | M | SR | FREE | 90 | 2009 | Index |
| 58 | 2011 | Evonik Chemie | GER | Pharma | 14.540 | L | 33.556 | M | SR | COP | 120 | 2009 | Index |


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| # | Year | Company | Country | Sector | Revenue €m | Revenue size indicator | Employees | Employee size indicator | Report type | SR proxy: COP/GRI/ Other/Free | Pages | UNGC since | GRI reference |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 59 | 2014 | Evonik Chemie | GER | Pharma | 12.917 | M | 33.241 | M | SR | COP | 132 | 2009 | Index |
| 60 | 2017 | Evonik Chemie | GER | Pharma | 14.419 | L | 36.523 | M | SR | COP | 104 | 2009 | Index |
| 61 | 2008 | Fraport | GER | Transport | 2.102 | M | 23.079 | M | SR | COP | 68 | 2007 | none |
| 62 | 2011 | Fraport | GER | Transport | 2.453 | M | 20.595 | M | SR | COP/GRI | 63 | 2007 | Report |
| 63 | 2014 | Fraport | GER | Transport | 2.395 | M | 20.395 | M | SR | COP/GRI | 152 | 2007 | Report |
| 64 | 2017 | Fraport | GER | Transport | 2.935 | M | 20.673 | M | SR | COP/GRI | 191 | 2007 | Report |
| 65 | 2008 | Genmab | DK | Pharma | 100 | S | 309 | S | AR | | | no | none |
| 66 | 2011 | Genmab | DK | Pharma | 47 | S | 181 | S | SR | FREE | 4 | no | none |
| 67 | 2014 | Genmab | DK | Pharma | 114 | S | 173 | S | SR | FREE | 9 | no | none |
| 68 | 2017 | Genmab | DK | Pharma | 317 | S | 257 | S | SR | FREE | 11 | no | none |
| 69 | 2008 | Hapag Lloyd | GER | Transport | 6.204 | M | 6.872 | S | AR | | | no | none |
| 70 | 2011 | Hapag Lloyd | GER | Transport | 6.103 | M | 6.873 | S | AR | | | no | none |
| 71 | 2014 | Hapag Lloyd | GER | Transport | 6.808 | M | 10.949 | M | AR | | | no | none |
| 72 | 2017 | Hapag Lloyd | GER | Transport | 9.973 | M | 12.500 | M | SR | FREE | 86 | no | Index |
| 73 | 2008 | HHLA | GER | Transport | 1.327 | S | 5.001 | S | AR | | | no | none |
| 74 | 2011 | HHLA | GER | Transport | 1.217 | S | 4.797 | S | AR | | | no | none |
| 75 | 2014 | HHLA | GER | Transport | 1.200 | S | 5.194 | S | AR | | | no | Index |
| 76 | 2017 | HHLA | GER | Transport | 1.251 | S | 5.581 | S | AR | | | no | Index |
| 77 | 2008 | Jyske Bank | DK | Bank | 842 | M | 3.847 | M | AR | | | 2016 | none |
| 78 | 2011 | Jyske Bank | DK | Bank | 931 | M | 3.809 | M | SR | FREE | 3 | 2016 | none |
| 79 | 2014 | Jyske Bank | DK | Bank | 1.511 | M | 4.191 | M | SR | FREE | 10 | 2016 | none |
| 80 | 2017 | Jyske Bank | DK | Bank | 1.504 | M | 3.932 | M | SR | COP | 30 | 2016 | none |
| 81 | 2008 | Laan & Spar | DK | Bank | 77 | S | 339 | S | AR | | | no | none |
| 82 | 2011 | Laan & Spar | DK | Bank | 64 | S | 360 | S | AR | | | no | none |
| 83 | 2014 | Laan & Spar | DK | Bank | 76 | S | 369 | S | SR | FREE | 9 | no | none |
| 84 | 2017 | Laan & Spar | DK | Bank | 72 | S | 401 | S | SR | FREE | 10 | no | none |
| 85 | 2008 | Lufthansa | GER | Transport | 24.870 | L | 108.123 | L | SR | COP | 115 | 2002 | none |
| 86 | 2011 | Lufthansa | GER | Transport | 28.734 | L | 116.365 | L | SR | COP | 114 | 2002 | none |
| 87 | 2014 | Lufthansa | GER | Transport | 30.011 | L | 118.781 | L | SR | COP | 120 | 2002 | none |


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| # | Year | Company | Country | Sector | Revenue €m | Revenue size indicator | Employees | Employee size indicator | Report type | SR proxy: COP/GRI/ Other/Free | Pages | UNGC since | GRI reference |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 88 | 2017 | Lufthansa | GER | Transport | 35.579 | L | 129.424 | L | SR | COP | 120 | 2002 | Index |
| 89 | 2008 | Lundbeck | DK | Pharma | 1.513 | M | 5.526 | M | AR | | | 2009 | none |
| 90 | 2011 | Lundbeck | DK | Pharma | 2.146 | M | 5.690 | M | SR | COP | 13 | 2009 | none |
| 91 | 2014 | Lundbeck | DK | Pharma | 1.807 | M | 5.665 | M | SR | COP | 16 | 2009 | none |
| 92 | 2017 | Lundbeck | DK | Pharma | 2.312 | M | 4.980 | M | SR | COP | 14 | 2009 | none |
| 93 | 2008 | Maersk | DK | Transport | 52.631 | L | 119.599 | L | SR | FREE | 48 | 2009 | Reference |
| 94 | 2011 | Maersk | DK | Transport | 51.788 | L | 117.080 | L | SR | COP | 82 | 2009 | Reference |
| 95 | 2014 | Maersk | DK | Transport | 42.554 | L | 89.200 | L | SR | COP | 41 | 2009 | none |
| 96 | 2017 | Maersk | DK | Transport | 26.608 | L | 85.667 | L | SR | COP | 52 | 2009 | Reference |
| 97 | 2008 | Merck | GER | Pharma | 7.558 | M | 32.800 | M | SR | COP | 76 | 2005 | Index |
| 98 | 2011 | Merck | GER | Pharma | 10.276 | M | 40.676 | M | SR | COP | 78 | 2005 | Index |
| 99 | 2014 | Merck | GER | Pharma | 11.363 | M | 39.639 | M | SR | COP | 198 | 2005 | Index |
| 100 | 2017 | Merck | GER | Pharma | 15.327 | L | 52.880 | M | SR | COP | 199 | 2005 | Index |
| 101 | 2008 | Novo Nordisk | DK | Pharma | 6.107 | L | 26.575 | L | IR | | | 2002 | Reference |
| 102 | 2011 | Novo Nordisk | DK | Pharma | 8.895 | L | 32.632 | L | IR | | | 2002 | Reference |
| 103 | 2014 | Novo Nordisk | DK | Pharma | 11.906 | L | 41.450 | L | IR | | | 2002 | none |
| 104 | 2017 | Novo Nordisk | DK | Pharma | 14.975 | L | 42.682 | L | IR | | | 2002 | none |
| 105 | 2008 | Novozymes | DK | Pharma | 1.092 | M | 5.146 | M | IR | | | 2001 | Reference |
| 106 | 2011 | Novozymes | DK | Pharma | 1.409 | M | 5.824 | M | IR | | | 2001 | Reference |
| 107 | 2014 | Novozymes | DK | Pharma | 1.671 | M | 6.454 | M | IR | | | 2001 | Reference |
| 108 | 2017 | Novozymes | DK | Pharma | 1.109 | M | 6.245 | M | IR | | | 2001 | Reference |
| 109 | 2008 | Osram | GER | Consumer | | | | | na | | | 2005 | |
| 110 | 2011 | Osram | GER | Consumer | 5.000 | M | 40.000 | M | SR | COP/GRI | 17 | 2005 | Report |
| 111 | 2014 | Osram | GER | Consumer | 5.100 | M | 34.000 | M | SR | COP | 12 | 2005 | none |
| 112 | 2017 | Osram | GER | Consumer | 4.128 | M | 26.400 | M | SR | COP/GRI | 52 | 2005 | Report/COP |
| 113 | 2008 | Pandora | DK | Consumer | 464 | M | 2.337 | M | AR | | | 2010 | none |
| 114 | 2011 | Pandora | DK | Consumer | 892 | M | 5.387 | M | SR | COP | 21 | 2010 | none |
| 115 | 2014 | Pandora | DK | Consumer | 1.601 | M | 12.190 | L | SR | COP | 32 | 2010 | none |
| 116 | 2017 | Pandora | DK | Consumer | 3.054 | M | 20.904 | L | SR | COP | 43 | 2010 | none |


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| # | Year | Company | Country | Sector | Revenue €m | Revenue size indicator | Employees | Employee size indicator | Report type | SR proxy: COP/GRI/ Other/Free | Pages | UNGC since | GRI reference |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 117 | 2008 | Spar Nord | DK | Bank | 500 | M | 1.554 | M | AR | | | no | none |
| 118 | 2011 | Spar Nord | DK | Bank | 284 | S | 1.397 | M | AR | | | no | none |
| 119 | 2014 | Spar Nord | DK | Bank | 316 | S | 1.507 | M | AR | | | no | none |
| 120 | 2017 | Spar Nord | DK | Bank | 225 | S | 1.538 | M | SR | FREE | 32 | no | none |
| 121 | 2008 | Stada | GER | Pharma | 1.646 | S | 8.299 | M | AR | | | no | none |
| 122 | 2011 | Stada | GER | Pharma | 1.715 | S | 7.826 | S | AR | | | no | none |
| 123 | 2014 | Stada | GER | Pharma | 2.062 | S | 10.209 | M | AR | | | no | none |
| 124 | 2017 | Stada | GER | Pharma | 2.314 | S | 10.832 | M | AR | | | no | none |
| 125 | 2008 | Sydbank | DK | Bank | 1.000 | M | 2.478 | M | AR | | | no | none |
| 126 | 2011 | Sydbank | DK | Bank | 585 | M | 2.152 | M | AR | | | no | none |
| 127 | 2014 | Sydbank | DK | Bank | 448 | S | 2.101 | M | SR | FREE | 5 | no | none |
| 128 | 2017 | Sydbank | DK | Bank | 291 | S | 2.273 | M | SR | FREE | 42 | no | none |
| 129 | 2008 | TCM Group | DK | Consumer | | | | | na | | | 2011 | |
| 130 | 2011 | TCM Group | DK | Consumer | 43 | S | 258 | S | SR | COP | 8 | 2011 | none |
| 131 | 2014 | TCM Group | DK | Consumer | 58 | S | 255 | S | SR | COP | 8 | 2011 | none |
| 132 | 2017 | TCM Group | DK | Consumer | 110 | S | 410 | S | SR | COP | 8 | 2011 | none |
| 133 | 2008 | Villeroy & Boch | GER | Consumer | 841 | S | 10.193 | M | AR | | | no | none |
| 134 | 2011 | Villeroy & Boch | GER | Consumer | 743 | S | 8.558 | M | AR | | | no | none |
| 135 | 2014 | Villeroy & Boch | GER | Consumer | 766 | S | 7.675 | S | AR | | | no | none |
| 136 | 2017 | Villeroy & Boch | GER | Consumer | 837 | S | 8.099 | M | SR | FREE | 19 | no | Reference |
| 137 | 2008 | VTG | GER | Transport | 294 | S | 1.004 | S | AR | | | no | none |
| 138 | 2011 | VTG | GER | Transport | 750 | S | 1.170 | S | AR | | | no | none |
| 139 | 2014 | VTG | GER | Transport | 818 | S | 1.312 | S | AR | | | no | none |
| 140 | 2017 | VTG | GER | Transport | 1.014 | S | 1.527 | S | SR | FREE | 13 | no | none |
| 141 | 2008 | Wacker Chemie | GER | Pharma | 4.298 | M | 15.922 | M | SR | FREE | 88 | 2006 | Index |
| 142 | 2011 | Wacker Chemie | GER | Pharma | 4.910 | M | 17.168 | M | SR | FREE | 141 | 2006 | Index |
| 143 | 2014 | Wacker Chemie | GER | Pharma | 4.826 | M | 16.703 | M | SR | FREE | 212 | 2006 | Index |
| 144 | 2017 | Wacker Chemie | GER | Pharma | 4.924 | M | 13.811 | M | SR | COP | 21 | 2006 | Reference |
| 145 | 2008 | Westag & Getalit | GER | Consumer | 226 | S | 1.262 | S | AR | | | no | none |


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| # | Year | Company | Country | Sector | Revenue €m | Revenue size indicator | Employees | Employee size indicator | Report type | SR proxy: COP/GRI/ Other/Free | Pages | UNGC since | GRI reference |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 146 | 2011 | Westag & Getalit | GER | Consumer | 227 | S | 1.282 | S | AR | | | no | none |
| 147 | 2014 | Westag & Getalit | GER | Consumer | 223 | S | 1.301 | S | AR | | | no | none |
| 148 | 2017 | Westag & Getalit | GER | Consumer | 234 | S | 1.279 | S | SR | FREE | 24 | no | Reference |
| 149 | 2008 | Wüstenroth | GER | Bank | 900 | S | 9.806 | M | AR | | | no | none |
| 150 | 2011 | Wüstenroth | GER | Bank | 920 | S | 10.118 | M | SR | DNK | 21 | no | Index |
| 151 | 2014 | Wüstenroth | GER | Bank | 1.332 | S | 8.644 | M | SR | DNK | 31 | no | Index |
| 152 | 2017 | Wüstenroth | GER | Bank | 1.083 | S | 8.166 | M | SR | DNK | 38 | no | Index |


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| # | DISCLOSURE Sub-score | Environmental Sub-score | Employee Sub-score | Business Ethics Sub-score | Human Rights Sub-score | DIALOGUE Sub-score | DEVELOPMENT Sub-score | CREDIBILITY Sub-score | Total Quality Score | Ownership: dispersed: y/n | Foundation- or family-owned: y/n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 3 | | |
| 2 | 20 | 6 | 10 | 1 | 1 | 4 | 3 | 8 | 35 | | |
| 3 | 22 | 6 | 12 | 1 | 1 | 5 | 5 | 10 | 42 | | |
| 4 | 10 | 2 | 4 | 1 | 1 | 2 | 2 | 9 | 23 | y | n |
| 5 | 5 | 1 | 3 | 0 | 0 | 0 | 0 | 2 | 7 | | |
| 6 | 15 | 6 | 5 | 1 | 1 | 0 | 1 | 7 | 23 | | |
| 7 | 17 | 7 | 5 | 2 | 1 | 0 | 1 | 7 | 25 | | |
| 8 | 17 | 5 | 6 | 1 | 1 | 2 | 2 | 7 | 28 | n | n |
| 9 | 42 | 10 | 14 | 3 | 2 | 2 | 5 | 14 | 63 | | |
| 10 | 44 | 10 | 14 | 3 | 2 | 2 | 5 | 13 | 66 | | |
| 11 | 40 | 11 | 13 | 4 | 3 | 7 | 6 | 14 | 65 | | |
| 12 | 36 | 11 | 13 | 4 | 3 | 7 | 6 | 13 | 62 | y | n |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 14 | 15 | 6 | 4 | 2 | 0 | 2 | 3 | 9 | 29 | | |
| 15 | 14 | 6 | 6 | 1 | 0 | 3 | 4 | 11 | 32 | | |
| 16 | 15 | 6 | 6 | 1 | 1 | 2 | 3 | 11 | 31 | y | n |
| 17 | 10 | 6 | 4 | 0 | 0 | 1 | 3 | 8 | 22 | | |
| 18 | 17 | 7 | 6 | 2 | 1 | 2 | 4 | 11 | 34 | | |
| 19 | 17 | 6 | 6 | 1 | 1 | 2 | 4 | 11 | 34 | | |
| 20 | 18 | 7 | 6 | 2 | 1 | 1 | 4 | 11 | 34 | n | y |
| 21 | 25 | 9 | 10 | 2 | 1 | 7 | 3 | 10 | 45 | | |
| 22 | 29 | 9 | 10 | 2 | 2 | 6 | 3 | 12 | 50 | | |
| 23 | 29 | 8 | 11 | 2 | 2 | 6 | 2 | 11 | 48 | | |
| 24 | 29 | 9 | 11 | 2 | 1 | 6 | 2 | 11 | 48 | y | n |
| 25 | 2 | 0 | 2 | 0 | 0 | 1 | 0 | 1 | 4 | | |
| 26 | 20 | 8 | 9 | 1 | 1 | 5 | 3 | 12 | 40 | | |
| 27 | 20 | 7 | 9 | 1 | 1 | 5 | 3 | 13 | 41 | | |
| 28 | 18 | 6 | 7 | 2 | 1 | 5 | 3 | 14 | 40 | | |
| 29 | 22 | 6 | 9 | 1 | 1 | 3 | 4 | 6 | 35 | | |


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| # | DISCLOSURE Sub-score | Environmental Sub-score | Employee Sub-score | Business Ethics Sub-score | Human Rights Sub-score | DIALOGUE Sub-score | DEVELOPMENT Sub-score | CREDIBILITY Sub-score | Total Quality Score | Ownership: dispersed: y/n | Foundation- or family-owned: y/n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 | 22 | 6 | 9 | 1 | 1 | 4 | 6 | 7 | 39 | | |
| 31 | 25 | 6 | 6 | 2 | 1 | 4 | 3 | 10 | 42 | | |
| 32 | 24 | 7 | 6 | 3 | 1 | 6 | 3 | 10 | 43 | n | n |
| 33 | 21 | 6 | 6 | 1 | 0 | 8 | 5 | 10 | 44 | | |
| 34 | 16 | 5 | 4 | 1 | 0 | 6 | 3 | 11 | 36 | | |
| 35 | 25 | 5 | 9 | 3 | 2 | 5 | 2 | 8 | 40 | | |
| 36 | 25 | 5 | 7 | 2 | 3 | 8 | 2 | 10 | 45 | y | n |
| 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 39 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 4 | | |
| 40 | 14 | 3 | 7 | 2 | 1 | 4 | 2 | 4 | 24 | y | n |
| 41 | 21 | 7 | 6 | 1 | 1 | 5 | 7 | 11 | 44 | | |
| 42 | 28 | 8 | 12 | 2 | 1 | 7 | 5 | 12 | 52 | | |
| 43 | 32 | 9 | 14 | 3 | 1 | 8 | 4 | 15 | 59 | | |
| 44 | 34 | 9 | 12 | 3 | 2 | 8 | 4 | 15 | 61 | n | n |
| 45 | 8 | 6 | 2 | 0 | 0 | 0 | 2 | 4 | 14 | | |
| 46 | 21 | 8 | 6 | 0 | 1 | 7 | 6 | 8 | 42 | | |
| 47 | 23 | 8 | 8 | 0 | 1 | 8 | 5 | 10 | 46 | | |
| 48 | 26 | 8 | 9 | 1 | 1 | 3 | 5 | 9 | 43 | n | y |
| 49 | 5 | 2 | 3 | 0 | 0 | 0 | 1 | 3 | 9 | | |
| 50 | 19 | 6 | 9 | 2 | 1 | 7 | 4 | 10 | 40 | | |
| 51 | 23 | 8 | 9 | 2 | 1 | 5 | 6 | 14 | 48 | | |
| 52 | 22 | 8 | 9 | 2 | 2 | 5 | 5 | 15 | 47 | n | n |
| 53 | 7 | 3 | 4 | 0 | 0 | 0 | 1 | 3 | 11 | | |
| 54 | 23 | 6 | 5 | 3 | 1 | 2 | 6 | 7 | 38 | | |
| 55 | 32 | 8 | 7 | 4 | 2 | 2 | 6 | 10 | 50 | | |
| 56 | 31 | 10 | 7 | 4 | 1 | 4 | 8 | 10 | 53 | y | n |
| 57 | 19 | 6 | 8 | 2 | 1 | 5 | 4 | 11 | 39 | | |
| 58 | 28 | 9 | 8 | 3 | 1 | 7 | 5 | 12 | 52 | | |


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| # | DISCLOSURE Sub-score | Environmental Sub-score | Employee Sub-score | Business Ethics Sub-score | Human Rights Sub-score | DIALOGUE Sub-score | DEVELOPMENT Sub-score | CREDIBILITY Sub-score | Total Quality Score | Ownership: dispersed: y/n | Foundation- or family-owned: y/n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 59 | 30 | 9 | 10 | 3 | 3 | 6 | 4 | 13 | 53 | | |
| 60 | 32 | 9 | 10 | 3 | 2 | 6 | 4 | 15 | 57 | n | y |
| 61 | 26 | 10 | 13 | 2 | 1 | 5 | 4 | 10 | 45 | | |
| 62 | 26 | 11 | 11 | 1 | 1 | 7 | 4 | 12 | 49 | | |
| 63 | 27 | 11 | 11 | 2 | 2 | 8 | 4 | 13 | 52 | | |
| 64 | 25 | 7 | 12 | 3 | 2 | 8 | 4 | 14 | 51 | n | n |
| 65 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 66 | 7 | 2 | 4 | 1 | 0 | 1 | 3 | 1 | 12 | | |
| 67 | 12 | 3 | 7 | 1 | 0 | 2 | 2 | 3 | 19 | | |
| 68 | 10 | 2 | 7 | 1 | 0 | 1 | 3 | 3 | 17 | y | n |
| 69 | 5 | 4 | 1 | 0 | 0 | 2 | 0 | 1 | 8 | | |
| 70 | 7 | 5 | 2 | 0 | 0 | 2 | 0 | 1 | 10 | | |
| 71 | 4 | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 8 | | |
| 72 | 26 | 8 | 10 | 1 | 1 | 7 | 2 | 7 | 42 | n | n |
| 73 | 4 | 1 | 2 | 1 | 0 | 2 | 2 | 5 | 13 | | |
| 74 | 13 | 6 | 5 | 1 | 0 | 3 | 3 | 8 | 27 | | |
| 75 | 15 | 7 | 6 | 1 | 0 | 4 | 2 | 11 | 32 | | |
| 76 | 18 | 7 | 7 | 2 | 1 | 5 | 2 | 11 | 36 | n | n |
| 77 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 78 | 11 | 3 | 3 | 0 | 0 | 0 | 1 | 2 | 14 | | |
| 79 | 15 | 4 | 6 | 0 | 0 | 2 | 2 | 1 | 20 | | |
| 80 | 27 | 8 | 7 | 1 | 1 | 7 | 4 | 6 | 44 | n | n |
| 81 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 2 | | |
| 82 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 5 | | |
| 83 | 15 | 3 | 7 | 1 | 0 | 2 | 2 | 5 | 24 | | |
| 84 | 15 | 3 | 7 | 1 | 0 | 2 | 3 | 5 | 25 | n | n |
| 85 | 27 | 10 | 12 | 1 | 1 | 10 | 4 | 13 | 54 | | |
| 86 | 29 | 10 | 13 | 1 | 1 | 8 | 3 | 10 | 50 | | |
| 87 | 30 | 11 | 11 | 2 | 1 | 7 | 3 | 9 | 49 | | |


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| # | DISCLOSURE Sub-score | Environmental Sub-score | Employee Sub-score | Business Ethics Sub-score | Human Rights Sub-score | DIALOGUE Sub-score | DEVELOPMENT Sub-score | CREDIBILITY Sub-score | Total Quality Score | Ownership: dispersed: y/n | Foundation- or family-owned: y/n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 88 | 31 | 11 | 10 | 2 | 2 | 6 | 4 | 9 | 50 | y | n |
| 89 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 90 | 26 | 7 | 7 | 3 | 1 | 4 | 5 | 9 | 44 | | |
| 91 | 21 | 6 | 8 | 3 | 1 | 3 | 3 | 6 | 33 | | |
| 92 | 25 | 7 | 9 | 3 | 2 | 3 | 3 | 10 | 41 | n | y |
| 93 | 14 | 8 | 5 | 0 | 0 | 6 | 3 | 11 | 34 | | |
| 94 | 31 | 11 | 10 | 3 | 2 | 8 | 8 | 13 | 60 | | |
| 95 | 28 | 7 | 7 | 2 | 1 | 8 | 4 | 14 | 54 | | |
| 96 | 26 | 9 | 7 | 3 | 2 | 10 | 5 | 14 | 55 | n | y |
| 97 | 28 | 9 | 10 | 2 | 2 | 7 | 4 | 8 | 47 | | |
| 98 | 31 | 11 | 9 | 4 | 2 | 7 | 4 | 14 | 56 | | |
| 99 | 38 | 11 | 14 | 4 | 2 | 11 | 5 | 15 | 69 | | |
| 100 | 37 | 11 | 13 | 4 | 2 | 9 | 3 | 13 | 62 | y | n |
| 101 | 32 | 9 | 9 | 4 | 1 | 3 | 6 | 15 | 56 | | |
| 102 | 31 | 8 | 8 | 5 | 1 | 5 | 6 | 15 | 57 | | |
| 103 | 35 | 8 | 8 | 5 | 1 | 3 | 6 | 15 | 59 | | |
| 104 | 36 | 9 | 8 | 5 | 1 | 3 | 6 | 15 | 60 | n | y |
| 105 | 11 | 4 | 6 | 0 | 1 | 2 | 2 | 11 | 26 | | |
| 106 | 15 | 4 | 6 | 2 | 1 | 4 | 4 | 12 | 35 | | |
| 107 | 20 | 5 | 7 | 3 | 1 | 5 | 4 | 12 | 41 | | |
| 108 | 19 | 6 | 6 | 3 | 1 | 3 | 4 | 15 | 41 | n | y |
| 109 | na | na | na | na | na | na | na | na | na | | |
| 110 | 22 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 26 | | |
| 111 | 15 | 6 | 3 | 2 | 1 | 3 | 1 | 2 | 21 | | |
| 112 | 22 | 7 | 8 | 2 | 1 | 6 | 4 | 10 | 42 | y | n |
| 113 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 114 | 21 | 4 | 10 | 2 | 1 | 2 | 6 | 5 | 34 | | |
| 115 | 32 | 9 | 15 | 2 | 2 | 4 | 5 | 8 | 49 | | |
| 116 | 35 | 9 | 15 | 3 | 1 | 3 | 4 | 8 | 50 | y | n |


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| # | DISCLOSURE Sub-score | Environmental Sub-score | Employee Sub-score | Business Ethics Sub-score | Human Rights Sub-score | DIALOGUE Sub-score | DEVELOPMENT Sub-score | CREDIBILITY Sub-score | Total Quality Score | Ownership: dispersed: y/n | Foundation- or family-owned: y/n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 117 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 5 | 9 | | |
| 118 | 3 | 0 | 3 | 0 | 0 | 3 | 1 | 3 | 10 | | |
| 119 | 3 | 0 | 2 | 0 | 0 | 4 | 0 | 3 | 10 | | |
| 120 | 19 | 5 | 9 | 2 | 0 | 5 | 2 | 6 | 32 | n | y |
| 121 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 122 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 123 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 124 | 9 | 1 | 4 | 0 | 1 | 0 | 1 | 4 | 14 | n | n |
| 125 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 4 | | |
| 126 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 4 | | |
| 127 | 6 | 1 | 2 | 1 | 0 | 0 | 1 | 2 | 9 | | |
| 128 | 19 | 5 | 7 | 1 | 1 | 4 | 0 | 7 | 30 | y | n |
| 129 | na | na | na | na | na | na | na | na | na | | |
| 130 | 10 | 4 | 3 | 1 | 1 | 1 | 1 | 3 | 15 | | |
| 131 | 10 | 4 | 3 | 1 | 1 | 0 | 0 | 3 | 13 | | |
| 132 | 9 | 3 | 3 | 1 | 1 | 0 | 0 | 3 | 12 | y | n |
| 133 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 134 | 9 | 5 | 2 | 1 | 0 | 0 | 1 | 2 | 12 | | |
| 135 | 9 | 3 | 3 | 1 | 0 | 1 | 1 | 2 | 13 | | |
| 136 | 19 | 7 | 6 | 2 | 1 | 4 | 0 | 2 | 25 | y | n |
| 137 | 2 | 0 | 1 | 0 | 0 | 2 | 0 | 1 | 5 | | |
| 138 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | | |
| 139 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | | |
| 140 | 7 | 1 | 3 | 1 | 1 | 3 | 0 | 4 | 14 | n | n |
| 141 | 20 | 9 | 9 | 1 | 1 | 5 | 5 | 11 | 41 | | |
| 142 | 31 | 11 | 14 | 3 | 1 | 6 | 5 | 11 | 53 | | |
| 143 | 32 | 11 | 15 | 4 | 1 | 7 | 3 | 11 | 53 | | |
| 144 | 20 | 7 | 9 | 2 | 1 | 4 | 3 | 6 | 33 | n | y |
| 145 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |


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| # | DISCLOSURE Sub-score | Environmental Sub-score | Employee Sub-score | Business Ethics Sub-score | Human Rights Sub-score | DIALOGUE Sub-score | DEVELOPMENT Sub-score | CREDIBILITY Sub-score | Total Quality Score | Ownership: dispersed: y/n | Foundation- or family-owned: y/n |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 146 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 147 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 3 | | |
| 148 | 15 | 5 | 7 | 0 | 1 | 2 | 0 | 3 | 20 | n | n |
| 149 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| 150 | 17 | 6 | 9 | 1 | 0 | 7 | 0 | 5 | 29 | | |
| 151 | 18 | 6 | 10 | 2 | 0 | 7 | 1 | 5 | 31 | | |
| 152 | 16 | 7 | 8 | 1 | 0 | 6 | 1 | 7 | 30 | n | y |
| | | | | | | | | | | | |


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