Discretionary powers in CSR, ESG and sustainability – A critical analysis of executives' influences in shaping corporate CSR profiles

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Abstract

Corporate social responsibility (CSR) has evolved into a widespread business practice in recent decades and continues to grow in importance due to pressing environmental and social challenges and related stakeholder demands. In practice, however, the extent of actual CSR engagement and reporting varies considerably between companies – even between those with similar characteristics. These differences mainly arise due to the voluntary nature of the construct and the largely unregulated environment of CSR reporting, which leaves a wide margin of discretion to companies' executives who are responsible for strategic decision-making and setting the direction of the firm. Given that it is particularly executives' personal characteristics and motivations, stakeholder expectations and governance mechanisms that influence their decision-making, this dissertation comprises four research papers that each focus on different aspects of these influences to explore how executives use the discretionary powers associated with CSR to shape their firms' CSR profiles.

In particular, the first paper provides a systematic literature review on the current state of research regarding the impact of CEO-related determinants on firms' CSR performance. The second paper builds on the findings and examines the impact of CEOs' reputational ambitions – a previously underexplored driver – as a moderator of the firm size – CSR link. The third paper investigates managements' discretion exercise in terms of CSR reporting, by analysing the transparency and reporting practices of CSR controversies. Finally, the fourth paper analyses the effectiveness of CSR-linked executive compensation – a governance mechanism widely used to align executives' CSR decision-making with stakeholder expectations – by exploring its impact on CSR-washing activities.

In summary, the results indicate that executives largely exercise their discretion in ways that prioritise corporate image and personal reputation over genuine CSR commitment and transparency, revealing significant shortcomings in the efficacy of current CSR practices and providing important implications for more thorough and precise governance, regulation and accountability mechanisms.

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List of Abbreviations

alt.	Alternative
CEO	Chief executive officer
CSR	Corporate social responsibility
CSRC	Corporate social responsibility controversies
CSRD	Corporate Sustainability Reporting Directive
Eds.	Editors
e.g.	Exempli gratia
EPS	Earnings per share
ESG	Environmental, social, governance
et al.	Et alii
EU	European Union
GRI	Global Reporting Initiative
i.e.	Id est
IND	Industry
p.	Page
pp.	Pages
R&D	Research and development
RM	Reputation management
ROA	Return on assets
SASB	Sustainability Accounting Standards Board
SD	Standard deviation
UN	United Nations
UNGC	United Nations Global Compact
U.S.	United States
WCED	World Commission on Environment and Development

A Introduction

A.1 Motivation of the research topic and research model

Over the past few decades, increasing environmental and societal challenges have led consumers, activists, investors and society at large to put pressure on companies to account for the environmental and social impacts of their activities (Porter and Kramer, 2006) and to integrate social responsibility into their corporate strategies (e.g. Carroll, 1991b; Elkington, 1994; Siltaloppi et al., 2021). As a result, corporate social responsibility (CSR) has become a common business practice and a key element in the pursuit of sustainable development (Kolk and van Tulder, 2010; Wickert et al., 2016). Although no agreed-upon definition of CSR exists, most definitions are congruent and emphasize that CSR reflects a company's commitment towards ethical behaviour, community welfare, environmental sustainability and economic prosperity, and involves a balanced approach to managing the interests of all stakeholders, including shareholders, employees, customers and the community at large (Dahlsrud, 2008; Kleine and Hauff, 2009; Sarkar and Searcy, 2016). A holistic approach to CSR thereby not only comprises the strategic integration of and engagement in CSR initiatives, but also comprehensive, transparent and truthful reporting on firms' actual performance and progress in this vein in order to inform stakeholders and reduce existing information asymmetries (Archambeault et al., 2008; Hahn and Lülfs, 2014). In the literature, CSR is often interchangeably used with the terms environmental, social and governance (ESG) and sustainability (e.g. Bannier et al., 2019; Clément et al., 2023; Gangi et al., 2021). Although some researchers argue that these are distinct concepts – with ESG explicitly including governance aspects, CSR only implicitly including governance issues based on their impact on environmental and social factors (Chang et al., 2022; Gillan et al., 2021), and sustainability specifically focusing on the long-term perspective (WCED, 1987) – all concepts ultimately refer to corporate actions intended to contribute to a sustainable, equitable and ethical development of business practices. This dissertation therefore follows the vast majority of researchers and uses the terms interchangeably.

In practice, the actual level of commitment to CSR varies notably between companies – even within the same industry and among firms with similar characteristics – as the voluntary nature of the construct offers high discretionary powers (Dare, 2016). This variability is further compounded by the considerable leeway in CSR reporting. Despite several CSR reporting guidelines, standards and recommendations aimed at assisting companies in providing useful information (Searcy and Buslovich, 2014; Tschopp and Huefner, 2015), these are not

mandatory and the whole topic is still largely unregulated or only superficially regulated in most countries (Cenci, 2023; Tschopp and Nastanski, 2014). Firms are thus left with major freedom to decide on the scope and depth of their reporting, which additionally contributes to the diversity in how CSR is approached and communicated. Overall, these high discretions place considerable power in the hands of executives, who are responsible for strategic decision-making and essentially determine the overall direction of the company (Aguinis, 2011). To shed light on the varying CSR profiles, it is therefore crucial to explore how different driving-forces impact executives' decisions in terms of CSR discretion and thus influence corporate CSR outcomes.

Previous literature has generally shown that diverse factors influence managers' strategic decision-making (Shepherd and Rudd, 2014). In the specific context of CSR, however, three main forces can be identified, based on theoretical considerations, that exert particular impact on executives and thereby influence their discretionary decision-making: executives' personal characteristics and motivations, stakeholder expectations and implemented governance mechanisms.

Based on upper echelon theory, the first force influencing executives' CSR-related decision-making is their personal characteristics and motivations. The upper echelon theory was developed by Hambrick and Mason in 1984 and posits that companies' organizational outcomes – both strategies and effectiveness – are significantly influenced by the personal characteristics of their top executives. According to this theory, the cognitive bases, personalities, and values of executives shape their interpretations of the external environment and consequently guide their strategic decisions (Hambrick and Mason, 1984), including those related to CSR.

The second force comprises stakeholder expectations and is based on legitimacy theory. Legitimacy theory emphasizes that a company's survival and success depend not solely on its economic performance, but also on the extent to which its activities are consistent with societal expectations and the goals of the superordinate system in which it operates (Mathews, 1993; Parsons, 1992). Given that companies typically act in a network of exchange relationships with diverse stakeholders and are highly dependent on resources from their environment – including employees, customers, and public authorities – addressing their stakeholders' expectations about appropriate business conduct becomes key to securing and sustaining their legitimacy within the broader societal context (Gray, 2010; Hahn and Lülfs, 2014). From this legitimacy perspective, CSR engagement is a crucial tool for aligning corporate activities with stakeholders' demands and norms and mitigating any negative perceptions (Deegan, 2002; Susith and Stewart, 2014). Consequently, given that executives have a vested interest in their

companies' survival and legitimacy, stakeholder expectations present an important lever and have the potential to exert significant influence on executives' CSR-related decision-making. This is especially true regarding CSR reporting, as CSR reports are an essential means of accountability and the main channel for providing stakeholders with information on companies' CSR performances and activities.

The third force exerting influence on executives' decision-making is governance mechanisms. Governance mechanisms are instruments implemented to ensure an alignment between the interests of executives and their corporations' various stakeholders, including shareholders, employees, consumers and society at large (Tricker, 2012). These mechanisms encompass a wide range of tools, such as executive compensation schemes, internal policies, shareholder rights, and internal audits (e.g. Filatotchev and Allcock, 2010; Leung et al., 2004; Visseren-Hamakers, 2015). Their conceptual foundation is traditionally rooted in agency theory, which argues that there is an inherent conflict of interest between the company's principals (shareholders) and agents (executives delegated with decision-making responsibilities). Specifically, this theory suggests that agents, motivated by their personal interests, may not always make decisions that are congruent with the objectives of the principals, which may ultimately harm the performance of the company (Jensen and Meckling, 1976). Accordingly, governance mechanisms are designed to mitigate this conflict by aligning the interests of executives with those of the shareholders, ensuring that executives act in the best interest of the company and its shareholders (Eisenhardt, 1989). In CSR contexts, the traditional focus on shareholders as principals is usually broadened to include firms' complete stakeholders (Raelin and Bondy, 2013) and thereby accounts for a more holistic approach to governance that specifically emphasises the alignment of executives' decision-making with stakeholder demands. Taken together, governance mechanisms are thus the third force that influence executives' CSR-related decision-making and can be modelled as located between influences from executives' personal characteristics and motivations, and influences from stakeholder expectations, as they mitigate extreme influences from these forces.

Overall, these three main forces lead to individually different exercises of discretionary powers within the scope of CSR and thus exert varying influences on companies' overall CSR profiles. CSR profiles thereby not only comprise firms' CSR performance, as reflected in positive CSR contributions and involvement in CSR controversies, as well as CSR reporting behaviour, but also their engagement in CSR-washing activities. CSR-washing describes the act of misleading people into forming overly positive beliefs about a company's CSR practices by engaging in

merely symbolic CSR actions that lack substantive impact (Lyon and Montgomery, 2015; Walker and Wan, 2012) and thus poses a serious threat to sustainable development.

To shed light on these phenomena and derive important implications for practice, this dissertation includes four papers, each of which tackles a different sphere of the above-explained research model, in order to address the following overall research question:

How do executives use the discretionary powers associated with CSR to shape their firms' CSR profiles?

An overview of the explicit integration of the four research papers into the outlined research model is provided in Figure A-1.

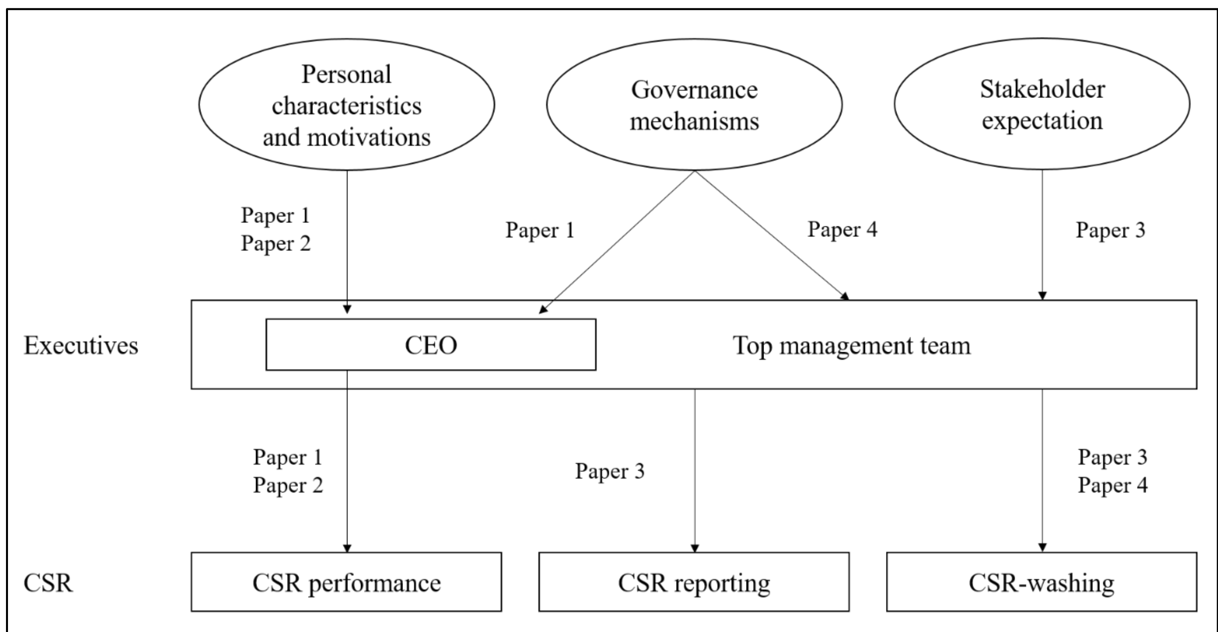

Figure A-1: Research model

The remainder of this dissertation is organized as follows: Section A.2 provides an overview of the four included research papers, highlighting each paper's research motivation and employed methodologies. Section B, C, D and E then present respectively Papers 1 to 4 in their entirety. Finally, Section F concludes with an overall presentation and discussion of the main findings, an outline of the contributions and practical implications, as well as a presentation of the limitations of the dissertation that suggests avenues for future research.

A.2 Overview of the research papers and research questions

A.2.1 Paper 1 – Impact of CEO-related determinants on CSR activity and performance: A review of the current research status and future implications

The first paper of this dissertation provides a systematic literature review on the current state of research regarding the impact of CEO-related determinants on CSR activities and performance. As outlined before, the high discretionary powers associated with CSR lead executives to have major influence on corporations' actual CSR engagement. Understanding the individual-level drivers shaping these decisions thus becomes crucial. Given that strategic decision-making is significantly influenced by intrinsic factors and incentive-related motives, including values, personalities, and compensation (England, 1967; Juliusson et al., 2005; Lauriola and Levin, 2001), an overview of these individual-level drivers and their impact on corporate CSR engagement is vital for comprehending differences in companies' CSR performance. Paper 1 therefore tackles this important issue and provides a comprehensive consolidation of the (empirical) evidence on CEO drivers of CSR.

The focus lies on CEOs as they are widely acknowledged as the key decision-makers in any organization (Chen et al., 2009; Li et al., 2016; Waldman et al., 2006a). While they usually do not make decisions in isolation, reacting instead to proposals from others (Bower, 1970; Burgelman, 1983), their influence is significant in shaping the context within which these proposals are formed. Specifically, this influence is exerted through CEOs' roles in selecting, promoting, and firing executives and other employees, and in organising various administrative processes (Chin et al., 2013). Consequently, although the CEO may not exclusively decide on CSR matters, their actions and decisions fundamentally establish the groundwork for CSR strategies, thereby exerting a substantial impact on the company's CSR direction and making an analysis of their particular driving-forces highly important.

To contribute to a more holistic understanding, Paper 1 provides an exclusive systematic review of empirical studies examining the influence of CEO drivers on CSR activities and performances. Its main purpose is the consolidation of the current research status, including the identification of weaknesses in recent studies and research gaps. In particular, Paper 1 addresses the following research questions:

RQ 1-1: What CEO-related drivers of CSR have been identified by previous research and how do they influence firms' CSR performance?

RQ 1-2: What CSR dimensions and measures have been used in the studies?

RQ 1-3: What consistencies and inconsistencies can be identified in current findings on CEO drivers of CSR, and what key research gaps remain in this area?

To conduct the review, Paper 1 applies the systematic literature review approach proposed by Fink (2010). For covering a wide range of research as well as ensuring valid results, the EBSCO Business Source Complete database as well as the Web of Science database were selected to perform the analysis. In total, the search strategy resulted in a final sample of 93 studies on which the review is based.

Table A-1 presents a short summary of the key information on Papers 1 to 4, including the title, authors, methodology and sample, authors' contributions, presentations and submission status to research journals.

A.2.2 Paper 2 – Staging or real commitment? CEO reputation management as a moderator of the influence of firm size on corporate social responsibility

The second paper of this dissertation explores the moderating effect of CEO reputation management on the relationship between firm size and CSR performance, as well as CSR controversies. Firm size is generally understood as a structural driver of firms' CSR performance. Studies by Brammer and Millington (2006), D'Amato and Falivena (2020), Helmig et al. (2016) and Udayasankar (2008), for example, highlight that larger firms encounter more external pressure to demonstrate environmentally and socially responsible behaviour, and are moreover equipped with the necessary financial resources and mature organisational processes to effectively implement and sustain corresponding CSR practices. At the same time, however, larger companies are also more likely to be involved in CSR controversies. On the one hand, their size makes them more susceptible to public scrutiny and media attention, increasing the likelihood of any irresponsible behaviour or CSR violations being detected (Dyck et al., 2008; Fiss and Zajac, 2006). On the other hand, the growth of a company is typically accompanied by a weakening of control over its activities, as efforts in communication, coordination and integration quickly multiply across various units and partners, thus contributing to a higher risk of corporate misbehaviour (Glynn, 1996; Wickert et al., 2016).

This dynamic environment, where larger firms have the capacity and opportunity to invest in CSR but also face increased risks of controversies, underscores the importance of the CEO's role. The CEO, as the key decision-maker, significantly influences whether and how these capabilities and challenges in the relationship between firm size and CSR are navigated. As shown in Paper 1, previous literature has already identified several individual-level drivers that impact CEOs' CSR-related decision-making. Particularly striking in this vein, however, is the

fact that research on CEOs' behavioural characteristics is rather scarce and, specifically, CEOs' reputational ambitions have thus far not been empirically investigated. This is surprising given that multiple scholars have already proposed that managers often place excessive emphasis on CSR activities to enhance their personal reputations (Barnea and Rubin, 2010; Cespa and Cestone, 2007). Overall, CEOs actively managing their reputation may be more proactive in ensuring responsible CSR practices and more diligent in preventing controversies, as CSR is highly value-relevant (Xue et al., 2022) and they can thus personally benefit from the positive perception and increased goodwill that goes along with being associated with ethical and sustainable business practices (Malik, 2015; Petrenko et al., 2016). Their personal commitment to maintaining a positive public image may lead to more careful and strategic CSR decisions, which in turn affects the firm's overall CSR performance and involvement in controversies.

To shed light on these potential phenomena, Paper 2 examines how CEOs' reputation management influences the extent to which firms of different sizes engage in CSR activities and navigate CSR controversies, thereby contributing novel insights to the understanding of CSR dynamics in the context of executive influence. In particular, it addresses the following two research questions:

RQ 2-1: How does CEOs' reputation management moderate the relationship between firm size and CSR performance?

RQ 2-2: How does CEOs' reputation management moderate the relationship between firm size and CSR controversies?

For the analysis, a cross-sectional dataset is constructed for the year 2019, consisting of 128 listed companies from seven Western European countries. CSR and financial data are obtained from the Refinitiv Eikon database (formerly Thomson Reuters). For CEOs' reputation management, a novel measure is created based on hand-collected data from CEOs' LinkedIn profiles and postings within the year 2019. The hypothesized relationships are tested using the ordinary least squares regression method.

A.2.3 Paper 3 – A shut mouth catches no flies? – Analysing the transparency of ESG controversies in corporate reporting within the textile and pharmaceutical industry

Paper 3 of this dissertation examines the transparency of ESG controversies in corporate reporting within the textile and pharmaceutical industry. ESG controversies generally refer to the activities, incidents or practices of a company that have a significant negative impact on, or

pose risks to, the environment, society or aspects of corporate governance (e.g. DasGupta, 2022; de Franco, 2020; Passas et al., 2022). As such, they are a critical element of sustainability reporting, which is essential to providing stakeholders with a complete and balanced picture of a company's ESG situation and performance (GRI, 2021; Hahn and Lülfs, 2014). However, considering that there are no concrete mandatory regulations on the disclosure of sustainability information, the reporting on negative ESG aspects remains voluntary and creates a dilemma for management: On the one hand, disclosing negative aspects in ESG reporting can mitigate stakeholder scepticism by providing a full, transparent view of a company's ESG status, demonstrating the firm's accountability and commitment to risk management and future improvement (Hahn and Lülfs, 2014; Melinda and Wardhani, 2020; Reimsbach and Hahn, 2015). On the other hand, the disclosure of ESG controversies also bears risks, such as adverse financial impacts and increased stock market sensitivity, given that sustainability impacts present value-relevant information for investors (Capelle-Blancard and Petit, 2019; Dhaliwal et al., 2012; de Vincentiis, 2022). When the controversies sharply contrast with societal norms and stakeholder values, they even pose serious risks to a company's legitimacy (Chan and Milne, 1999; Davies and Olmedo-Cifuentes, 2016). Against this background, it is therefore questionable how management deals with this dilemma in practice.

Previous research on ESG controversy disclosure has mainly focused on the way companies rhetorically report on corresponding incidents (e.g. Boiral, 2016; Hahn and Lülfs, 2014; Talbot and Boiral, 2018). Significantly fewer studies have concentrated on the extent of negative ESG contributions in sustainability reports (e.g. Einwiller and Carroll, 2020; KPMG, 2020). Particularly striking in this context is the fact that current studies on the quantity of ESG controversies largely limit their scope to the controversies presented within the company reports themselves, without considering the actual incidents as reported by external sources like news releases. The study of Boiral (2013) is an exception, but is outdated, as it focuses on sustainability reports from 2007. Given that these relations are essential in assessing the transparency of corporate reporting, Paper 3 addresses this important research gap and analyses the transparency and reporting practice of ESG controversies by building on externally sourced data for identifying controversial ESG incidents.

In non-regulated reporting contexts, transparency can be achieved if stakeholders can effectively identify pertinent sustainability issues, locate information on these issues within corporate reports, and evaluate whether the data provided adequately meets their information requirements (Coombs and Holladay, 2013). Additionally, management can boost credibility and demonstrate trustworthiness by following voluntary reporting guidelines and undergoing

external audits of their sustainability information (Abernathy et al., 2017; Caputo et al., 2021; Martínez-Ferrero and García-Sánchez, 2017). To gain a sound understanding of the transparency of current ESG controversy disclosure, Paper 3 introduces the following four research questions that tackle the four core elements of transparency:

RQ 3-1: In which reporting medium and at which exact location within the medium are ESG controversies disclosed?

RQ 3-2: What ESG controversies are disclosed and is there a difference in the scope and level of detail of disclosure depending on their topic area?

RQ 3-3: Are ESG controversies more likely to be reported and more fully reported if the report has been prepared in accordance with the GRI or other sustainability guidelines?

RQ 3-4: Are ESG controversies more likely to be reported and more fully reported if the report has been audited by a third party?

To answer these research questions, Paper 3 uses a sample of 190 controversies of 16 companies from the textile and pharmaceutical industries for the years 2018 to 2020, whose disclosure is analysed in 104 company reports. The focus is on textile and pharmaceutical companies as they play a decisive role in recent ESG scandals and are thus subject to particular pressure in this vein. The ESG controversies were identified using the Refinitiv Eikon database, while the corresponding news articles were collected from the respective news websites. The company reports for the relevant years were obtained from the companies' websites. The analysis is conducted using conceptual content analysis. For coding the company reports, a mixture of emergent and a priori coding is performed (Stemler, 2000) to facilitate a thorough and nuanced analysis of the data.

A.2.4 Paper 4 – Incentivising CSR-washing? – The influence of CSR-linked executive compensation on CSR-washing activities and the moderating effect of boards' monitoring commitments

The fourth paper of this dissertation analyses the influence of CSR-linked executive compensation on CSR-washing activities and how boards' monitoring commitments moderate this relationship. As shown by the previous dissertation papers and other research (e.g. Davidson et al., 2019; Park et al., 2020; Sheikh, 2019), executives have a strong influence on companies' CSR performance and reporting, which does not always result in positive contributions. Given growing stakeholder expectations regarding companies' CSR engagement, an increasingly widespread trend is to include CSR targets in executive

compensation in order to align managers' decision-making with the interests of CSR-demanding stakeholders (Derchi et al., 2021; Kolk and Perego, 2014; Maas, 2018). Several recent studies in this context indeed show positive influences of corresponding compensation schemes on companies' CSR performance (e.g. Cavaco et al., 2020; Derchi et al., 2021; Khenissi et al., 2022). However, their results need to be seen with caution as they are largely subject to data limitations. Concretely, these studies predominantly relied on CSR scores from major rating agencies, which tend to incorporate many symbolic CSR measures into their overall calculations (e.g. MSCI, 2022; Refinitiv, 2022) that may undermine their substantive value. Positive impacts on these scores may therefore not necessarily correspond to actual improvements in substantive CSR performance but instead reflect a rise in symbolic CSR activities. This concern is further compounded by the largely overarching or qualitative nature of most CSR targets linked to compensation (Maas, 2018), which offers executives considerable discretion in their pursuit and might result in an over-investment in easily realisable symbolic CSR measures. To explore whether CSR-linked compensation schemes are effective or rather incentivise CSR-washing, the first research question of Paper 4 is the following:

RQ 4-1: Does executives' CSR-linked compensation increase corporate CSR-washing activities?

In its advisory and monitoring role, the board is crucial in reducing executives' opportunistic behaviour (Adams and Ferreira, 2007; Fama and Jensen, 1983; Sarkar et al., 2008) and should thus mitigate potential negative effects of CSR-linked compensation. However, for effective performance, board members must be actively engaged and thoroughly informed about the company's operations and strategies (Adams and Ferreira, 2012; Hauser, 2018). Particularly critical to this role are regular attendance at board meetings, which facilitates access to vital information and participation in key discussions (Lipton and Lorsch, 1992; Masulis et al., 2012), and the overall workload of board members, which affects their ability to devote sufficient attention and time to their responsibilities (Ferris and Liao, 2019). To explore how board meeting attendance and the workload of board members (board busyness) influence the relationship between CSR-linked executive compensation and CSR-washing, Paper 4 additionally addresses the following two research questions:

RQ 4-2: How does board meeting attendance moderate the relationship between executives' CSR-linked compensation and CSR-washing?

RQ 4-3: How does board busyness moderate the relationship between executives' CSR-linked compensation and CSR-washing?

For the analysis, a panel dataset is constructed that comprises 4,217 firm-year observations from S&P 500 and Stoxx Europe 600 companies for the years 2017-2021. The focus lies on these two indices, as they comprise the largest and most powerful corporations from developed countries. All CSR and financial data are obtained from the Refinitiv Eikon database. For the CSR-washing variables, a novel measure is introduced based on raw data extracts from Refinitiv. The hypothesized relationships are tested using ordinary least squares regression models with industry- and year-fixed effects.

Table A-1: Overview of the four research papers included in this dissertation

Paper number	Title	Authors	Methodology and sample	Author contributions	History and status
Paper 1	Impact of CEO-related determinants on CSR activity and performance: A review of the current research status and future implications	Sophia Schwoy, Andreas Dutzi	Systematic literature review: Review of 93 empirical studies	Sophia Schwoy: Conceptualization, Methodology, Investigation – Coder, Data Curation, Formal Analysis, Visualization, Writing – Original Draft, Review & Editing Andreas Dutzi: Review & Editing	Presented at the European Academy of Management Annual Conference (EURAM) 2020 and at the PhD Research Seminar BWL 2021 at the University of Siegen Submitted to the Journal of Business Ethics (VHB-Jourqual3: B): Rejected after revise and resubmit
Paper 2	Staging or real commitment? CEO reputation management as a moderator of the influence of firm size on corporate social responsibility performance and controversies	Sophia Schwoy, Andreas Dutzi, Maarten Corten, Tensie Steijvers	Quantitative: Cross-sectional sample of 128 Western European companies; CSR and financial data from Refinitiv Eikon database; CEO data hand-collected from CEOs' LinkedIn profiles and postings	Sophia Schwoy: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Visualization, Writing – Original Draft, Review & Editing Andreas Dutzi: Conceptualization, Review & Editing Maarten Corten: Conceptualization, Review & Editing Tensie Steijvers: Conceptualization, Review & Editing	Presented at the PhD Research Seminar BWL 2022 at the University of Siegen and the European Academy of Management Annual Conference (EURAM) 2022 Honoured with the Best Paper Award of the SIG Business for Society at the EURAM 2022 Published in Journal of Cleaner Production (VHB-Jourqual3: B): Schwoy et al. (2023). Journal of Cleaner Production 410, 137325. https://doi.org/10.1016/j.jclepro.2023.137325

Paper number	Title	Authors	Methodology and sample	Author contributions	History and status
Paper 3	A shut mouth catches no flies? –Analysing the transparency of ESG controversies in corporate reporting within the textile and pharmaceutical industry	Sophia Schwoy, Andreas Dutzi, Juliane Messing	Qualitative content analysis: Sample of 190 ESG controversies from 16 textile and pharmaceutical companies for the years 2018-2020; 104 company reports retrieved from companies' websites and 190 news articles identified using the Refinitiv Eikon database and retrieved from the corresponding news' websites	Sophia Schwoy: Conceptualization, Methodology, Investigation – Coder 1, Data Curation, Formal Analysis, Visualization, Writing – Original Draft, Review & Editing Andreas Dutzi: Review Juliane Messing: Investigation – Coder 2	Presented at the European Academy of Management Annual Conference (EURAM) 2023 and at the British Academy of Management Annual Conference (BAM) 2023 Submitted to Management Decision (VHB-Jourqual3: C): Revise and resubmit
Paper 4	Incentivising CSR-washing? – The influence of CSR-linked executive compensation on CSR-washing activities and the moderating effect of boards' monitoring commitments	Sophia Schwoy, Martin Thomsen, Andreas Dutzi	Quantitative: Panel sample of 4,217 firm-year observations from S&P 500 and Stoxx Europe 600 companies for the years 2017-2021; CSR and financial data from Refinitiv Eikon database	Sophia Schwoy: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Visualization, Writing – Original Draft, Review & Editing Martin Thomsen: Formal Analysis Andreas Dutzi: Review	Presented at the Summer School 'Corporate Governance and the Effectiveness of Boards' of the University of Groningen and at the Annual Conference of the International Corporate Governance Society (ICGS) 2023 To be submitted to the Journal of Business Research (VHB-Jourqual3: B)

B Impact of CEO-related determinants on CSR activity and performance: A review of the current research status and future implications

Authors

Sophia Schwoy, Andreas Dutzi

History of the study

The paper was presented at the European Academy of Management Annual Conference (EURAM) 2020 and at the PhD Research Seminar BWL 2021 at the University of Siegen.

Publication status

This paper was submitted to the Journal of Business Ethics: Rejected after revise and resubmit.

Contribution statement

Sophia Schwoy: Conceptualization, Methodology, Investigation – Coder, Data Curation, Formal Analysis, Visualization, Writing – Original Draft, Review & Editing

Andreas Dutzi: Review & Editing

B.1 Introduction

Over the last three decades, the economic crisis and an awareness of the ongoing global environmental changes have permitted society, and especially governments, activists, and the media, to put pressure on companies to account for the social and environmental consequences of their activities (Porter and Kramer, 2006). As a result, corporate social responsibility (CSR) has become a priority for businesses all over the world, with research around the topic increasing exponentially (Fabrizi et al., 2014). One major interest in this context lies in the determinants that influence the particular strategy and extent of a firms' CSR. Multiple researchers found significant effects of macro-level drivers like regulation, industry-specific characteristics, or stakeholder pressure (e.g. Banerjee et al., 2003; Delmas and Toffel, 2004) as well as firm-level drivers like size or organizational designs (e.g. Ho et al., 2019; Udayasankar, 2008). However, these drivers were not able to explain the highly divergent CSR strategies of companies within the same industry and with overlapping firm characteristics. Due to the fact that it is actually individuals who make organizational decisions and are responsible for their outcomes (Aguinis, 2011), calls for research on individual-level drivers got louder (e.g. Aguinis and Glavas, 2012). Accordingly, studies on the microfoundations of CSR expanded in recent years (Gond et al., 2017), including examinations of the influence of boards (Chang et al., 2017; Post et al., 2011), CSR committees (Konadu, 2017), management teams (Muller and Kolk, 2010; Reimer et al., 2018) and of single individuals like the CEO or CFO (Maak et al., 2016; Sun and Rakhman, 2013).

Given that individuals' decision-making is majorly influenced by intrinsic and incentive-related motives such as values, personalities or compensation (e.g. England, 1967; Juliusson et al., 2005; Lauriola and Levin, 2001), an overview of these individual-level drivers and their impact on corporate CSR engagement seems particularly important for understanding variations in CSR performance between companies. The CEO is widely perceived as the key decision maker in any organization (Chen et al., 2009; Li et al., 2016; Waldman et al., 2006a). Although they usually do not decide completely on their own, but rather respond to others' proposals (Bower, 1970; Burgelman, 1983), these proposals are directly influenced by the CEOs through creating the context in which they are developed. More specifically, by promoting, hiring and firing appropriate consultants and executives, putting incentives in place, and organizing further administrative arrangements (Chin et al., 2013). Thus, even though the CEO might not be the sole decision maker on CSR matters, he or she definitely lays the foundation for CSR decisions and thereby profoundly influences the company's CSR strategies. In line with this, the vast

majority of studies examining individuals' intrinsic and incentive-related motives for CSR focus on the CEO.

In order to derive implications about the dependence of firms' CSR performance on the CEO as the key corporate decision-maker, a thorough consolidation of the (empirical) evidence on CEO drivers of CSR is required. Even though there are some reviews that take into account CEO driving forces, these usually have a different scope, do not include the latest developments due to their publication date (Aguinis and Glavas, 2012; Gond et al., 2017) or focus on specific firm contexts e.g. family firms (Broccardo et al., 2019). Only the review paper of Velte (2019a) directly targets the influence of CEO incentives and characteristics on CSR and vice versa. However, his review solely covers certain CEO incentives and characteristics, broadens the focus with regard to CSR by also considering the influence on CSR reporting, and does not prioritise the effect of CEO influences on CSR, but also of how CSR influences CEOs. Thus, to address this current gap in CSR research and contribute to a more holistic understanding, our paper provides an exclusive systematic review of empirical studies examining the influence of CEO drivers on CSR activities and performances. Its main purpose is to summarize and integrate the findings of these studies in order to identify (in)consistencies and recommendations about the role of CEOs in CSR and hereby provide an overview for future research. Particularly, we aim to answer the questions of which CSR dimensions and measures were employed in the studies, which CEO individual-level drivers of CSR have been identified by researchers, and how they influence CSR performance.

The remainder of the paper is organized as follows. Section 2 describes the fundamental terminology and the research method used for identification and selection of relevant studies. Following that, descriptive results are presented in Section 3, before we analyse in-depth the studies along our integrative framework with a focus on the explored CSR dimensions as well as the specific CEO driving forces for CSR engagement in Section 4. Finally, we critically discuss our findings and close by identifying research gaps that should be addressed in the future in Section 5.

B.2 Terminology and methodology

B.2.1 Fundamental terminology

Many different definitions of CSR have emerged over the past half century (Carroll and Shabana, 2010). In an attempt to understand its concrete conceptualization, Dahlsrud (2008), for example, already identified a total of 37 definitions in his review, while Sarkar and Searcy (2016) found as many as 110 different definitions a few years later. Both of their detailed

analyses revealed that the various CSR definitions consistently refer to the same key dimensions: the stakeholder dimension, the social dimension, the economic dimension, the environmental dimension, and the voluntariness dimension. Thus, although a wide range of definitions is applied to CSR, often with considerable heterogeneous phrasing, they are largely congruent, making the absence of one generally accepted definition less problematic than it initially appears (Dahlsrud, 2008). Nevertheless, to provide a distinct reference, the following review adopts the latest definition of CSR by the European Commission, which specifies that CSR is 'the responsibility of enterprises for their impact on society' (European Commission, 2011 p. 6). In order to meet their CSR, 'enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders' (European Commission, 2011 p. 6).

B.2.2 Research method

To conduct our systematic review, we followed the approach proposed by Fink (2010). Thus, as a first step we selected our research questions, databases, and search terms. The second step comprised the usage of practical screening criteria to include or exclude studies from the review. Thirdly, we developed and applied methodological screening criteria in order to analyse the studies' contents. The last step completes the review by synthesizing and assessing our findings.

B.2.2.1 Selection of research question, databases and search terms

The objective of this study is to provide a comprehensive overview of the current state of research on the influence of CEOs on corporate CSR activities and performance. In particular, we seek to answer the following questions: what CSR dimensions and measures have been used in the studies, what individual-level CEO drivers of CSR have been identified by researchers and how do they influence CSR performance, what consistencies and inconsistencies can be identified in their findings, and what key research gaps remain in this area.

For covering a wide range of research as well as ensuring valid results, we selected the EBSCO Business Source Complete database to perform our analysis. This database includes nearly 2,000 journals in the fields of business, finance and accounting and management. To achieve an even broader coverage of journals, we complemented our search by also using the Web of Science database (formerly Web of Knowledge). The Web of Science database contains over

9,200 of the world's most impactful journals across 178 scientific disciplines, including over 3,400 social science journals (Clarivate, 2020).

In order to identify relevant studies, an extensive search combining synonymous keywords for the CEO sphere as well as the CSR sphere was conducted. To account for keywords with various suffixes, we employed asterisks. Thus, the following search formula was applied in particular: "CEO" or "Chief Executive Officer" and "CSR" or "Corporate Social Responsib*" or "Sustainab*".

B.2.2.2 Practical screening criteria

For articles to be included in the review, the initial search required studies: (a) to be published in a peer-reviewed journal; (b) to be in the English language; and (c) to use one of the synonymous keywords "CEO" or "Chief Executive Officer" as well as one of the synonymous keywords "CSR" or "Corporate Social Responsib*" or "Sustainab*". Regarding the year of publication, no restriction was placed so that we could capture the highest amount of potentially relevant studies. This first search step resulted in 1,328 articles across both databases.

After all potentially pertinent studies were identified, we conducted a second screening to assess their importance for our review based on title and abstract. The inclusion criteria for studies during this second screening required them:

1) to be an empirical study (i.e. not a book review, essay, literature review, conceptual paper, editorial, etc.).
2) to deal with CSR activities, investments, or performance. Studies solely dedicated to CSR reporting were excluded due to the fact that this is the responsibility of the CFO rather than the CEO.
3) to consider CEO attributes as the independent variable. Consequently, studies that considered CEO attributes as the dependent variable or moderator variable were not included.

The second screening by title and abstract led to the exclusion of 1,177 papers that did not meet the inclusion criteria or were duplicates.

This left us with 151 studies for in-depth analysis. Each of these 151 studies was reviewed beyond title and abstract into the main body and got assessed according to the inclusion criteria. The third screening step led to a further 60 excluded articles

Finally, the references of the 91 articles deemed relevant for the review were checked for further suitable studies that were not found through our keyword search. We identified two more

articles that passed our inclusion criteria, resulting in a final sample of 93 studies considered in the systematic review. Figure B-1 summarises our practical screening process in a flow diagram (see Table B-14 in the appendix for more details).

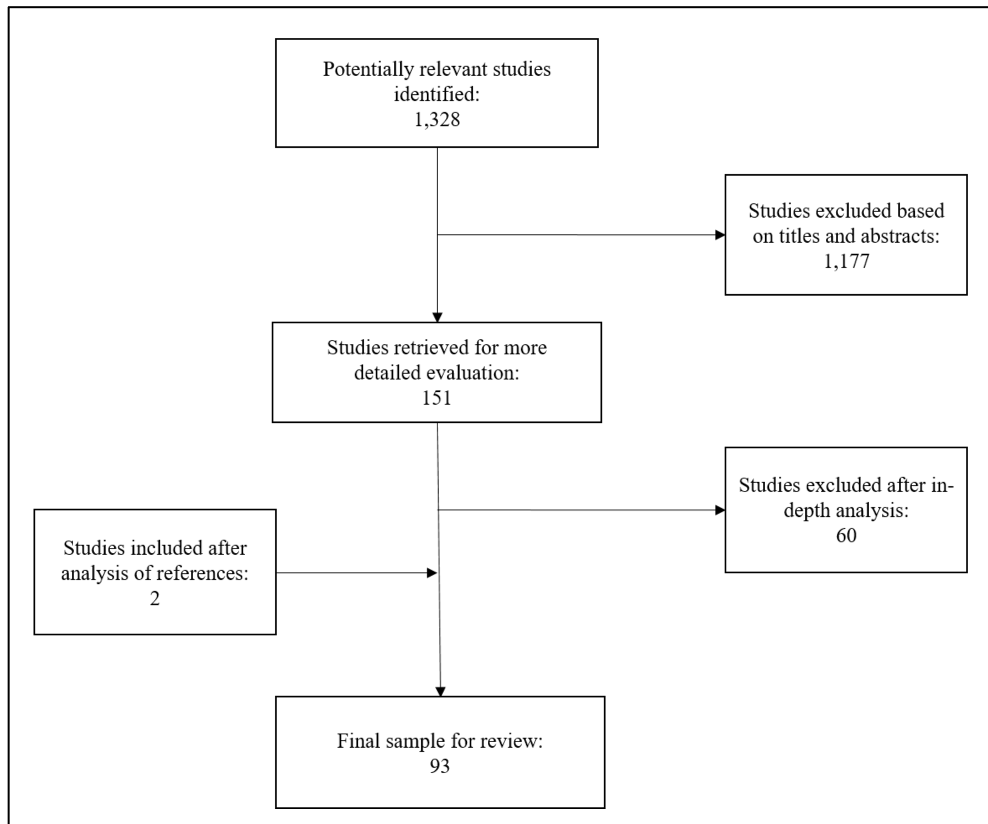

Figure B-1: Systematic review flow diagram

B.2.2.3 Methodological screening criteria

For applying methodological screening criteria, we used a quantitative and qualitative content analysis following the generic process model proposed by Mayring (2010). The model contains four steps of a content analysis:

1) Material collection: The first step comprises the collection and delimitation of the material (see above) as well as the defining of the unit of analysis (single article).

2) Descriptive analysis: In this step, an assessment of the formal aspects of the collected material is made to provide background for the theoretical analysis (see Section 3).

3) Category selection: The categorization step includes the selection of structural dimensions that form the major topics of the content analysis. In particular, we asked the following questions for building our structural categories: Which CSR dimensions were examined and how did the researchers measure CSR performance? Which CEO-related determinants

influence the CSR activity/ performance of companies? What kind of influence (positive/negative/none) do these determinants exert on companies' CSR activities/performance?

4) Material evaluation: In the final step, the whole material is analysed according to the structural dimensions that lead to the identification of relevant themes and issues as well as the interpretation of the results (see Section 4).

B.3 Descriptive analysis

B.3.1 Analysis of distribution over time

We found a total of 93 studies that examine the influence of particular CEO attributes on their companies' CSR activities or performances. Figure B-2 shows a frequency analysis of the final sample based on the articles' year of publication. Beginning with a very limited number of studies for the period 1994 – 2005, the rate of articles per year increased slightly in 2006 to four, just to drop again for the next nine years, with 2013 the only exception. Since 2015, a sharp uptrend in output of articles can be seen with a peak of 28 articles in 2019. The relatively high number of 15 articles published in the first quarter of 2020 shows that this trend is ongoing. All in all, this development is explainable by the circumstance that, until 2012, the vast majority of research on determinants of CSR focused either on macro-level drivers like regulation (Banerjee et al., 2003) and salience of pressures from stakeholders (Delmas and Toffel, 2004; Perez-Batres et al., 2012a), or on the effects of industry and firm-level characteristics like size and performance (Udayasankar, 2008). Since these drivers fail to explain different selections and applications of CSR strategies by companies who are subject to the same industry and institutional pressure, calls for the examination of micro-level drivers got louder. Following this vein, researchers started to place stronger emphasis on the influence of particular decision makers on CSR, such as boards (Azmat and Rentschler, 2017; Rao and Tilt, 2016) and CEOs. The high number of papers for 2019 and the first quarter of 2020 evidences that curiosity about the influence of CEOs on CSR has grown in the past years.

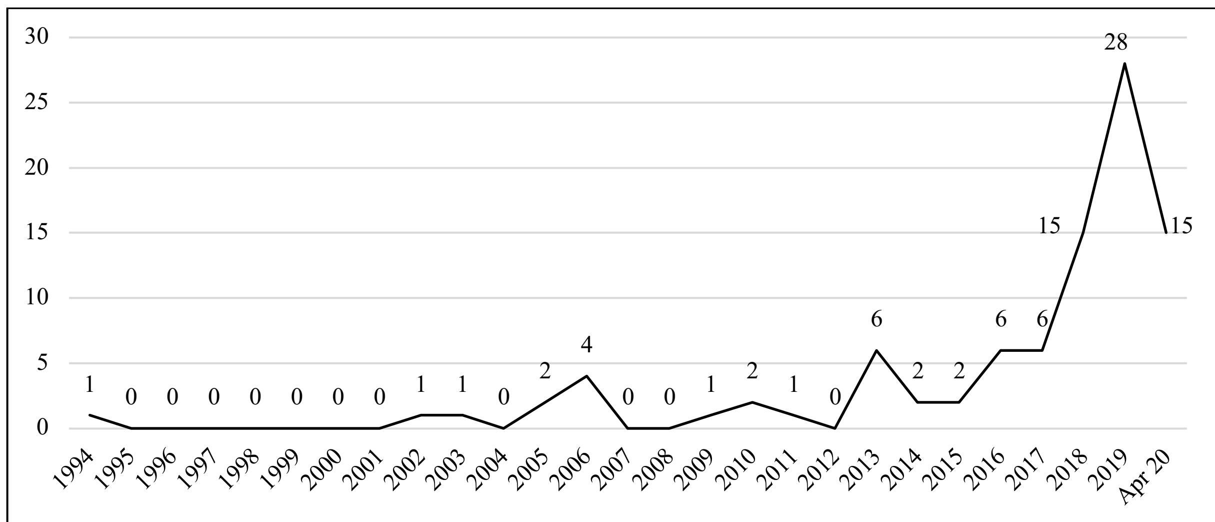

Figure B-2: Publication trend

B.3.2 Analysis of investigated countries

In Table B-1, we present an overview of the investigated countries to illustrate the geographical spread covered by the studies in our review. Particularly striking in this vein is the remarkably high investigation rate of the USA. Almost 65% of all articles focused on a U.S. sample as the basis for their empirical analyses. Following at a great distance, China is the second most investigated country (16%). With the exception of South Korea and Spain, both of which were examined in five and four articles respectively, all other countries were covered by less than three studies. The strong focus on the USA seems to be due to the fact that there are multiple databases available for U.S. firms and, even more importantly in this context, for CEO-related information. In particular, the ExecuComp database provided by S&P Global delivers profiles and detailed compensation data on CEOs at over 4,000 companies (S&P Global, 2019), and hereby becomes an essential information provider for studying the influence of CEO-related determinants on CSR. The good data availability for U.S. firms as a driver for research on U.S. samples becomes even clearer by taking a deeper look at the authors' countries of origin (identified by university location) for studies examining U.S. firms. Table B-2 provides a corresponding overview showing that 43% of the articles investigating U.S. samples were written by authors not affiliated with a U.S. university.

Table B-1: Distribution of the articles by investigated countries

Country	No. of studies	Percentage
USA	60	64,52
China	15	16,13
South Korea	5	5,38
Spain	4	4,30
Canada	3	3,23
Taiwan	2	2,15
UK	2	2,15
Brazil	1	1,08
Costa Rica	1	1,08
Denmark	1	1,08
France	1	1,08
Germany	1	1,08
Greece	1	1,08
Guatemala	1	1,08
India	1	1,08
Italy	1	1,08
Mexico	1	1,08
The Netherlands	1	1,08
Nigeria	1	1,08
Russia	1	1,08
Slovenia	1	1,08
Turkey	1	1,08
not assignable to specific country	4	4,30
Total	110*	118,28*

* The total is higher than 93 and 100% because some studies cover more than one country.

Table B-2: Overview of authorial affiliation to U.S. universities in relation to U.S. samples

No. of authors belonging to a U.S. university	No. of articles investigating U.S. samples	Percentage
All	19	31.67
At least one	15	25.00
None	26	43.33
	60	100

B.3.3 Analysis of investigated industry sectors

The articles in our sample investigated CEOs' influence on CSR activities and performances in companies across various industries. As can be seen from Table B-3, a clear majority (81%) of the studies did not focus on specific industry sectors but rather chose cross-industry samples. This is in line with the general notion that CSR is a major element of modern stakeholder management (Velte, 2019b) and an important – and indeed necessary – aspect of every

company's strategy (Carroll and Shabana, 2010). However, some industry sectors have higher impacts on social and environmental issues and thus face higher pressures regarding their CSR engagement (e.g. Perez-Batres et al., 2012b). Probably the most prominent example in this context is the manufacturing industry, which also represents the most examined specific industry in our review sample. All in all, the wide range of investigated industry sectors listed in Table B-3 suggests that research in CSR is diverse and not limited to specific industries.

Table B-3: Overview of investigated industry sectors

Industry sector	No. of articles	Percentage
No restriction to specific industries	75	80.65
- exclusion of financial sector	7	7.53
- exclusion of financial and utility sector	3	3.23
- exclusion of financial and regulated sector	1	2.15
- exclusion of financial and insurance sector	2	2.15
Manufacturing industry	8	8.60
Sensitive ("dirty") industries	2	2.15
Restaurant industry	2	2.15
Semiconductor industry	1	1.08
Banking sector	1	1.08
Service industry (excl. finance service)	1	1.08
Energy industry	1	1.08
Hotel industry	1	1.08
Textile manufacturing industry	1	1.08
Total	93	100

B.4 Review findings

B.4.1 Integrative framework and dominant theories

To provide a coherent and comprehensive characterization of the state of knowledge, we synthesize and analyse the articles along an integrative framework which we developed based on our methodological screening criteria. In particular, the relationship between CEO-related determinants and CSR performance serves as the basis for our proposed framework. As the dependent variable, CSR presents the framework's first emphasis. Two major issues are of special analytical focus in this vein, namely the dimensions of CSR that were examined in the articles as well as the respective measurement of the CSR performance. The CEO drivers that represent the independent variable constitute the second main emphasis of the framework. Taken together, we distinguished approximately 50 variables in this context, which were not only multiple in number but also quite diverse. Based on their specific characteristics, we grouped the variables into seven main categories: (1) general CEO characteristics, (2)

personality traits, (3) beliefs and values, (4) professional experiences, (5) leadership behaviour, (6) non-monetary incentives, and (7) monetary incentives. Figure B-3 presents our integrative framework for consolidating our review findings.

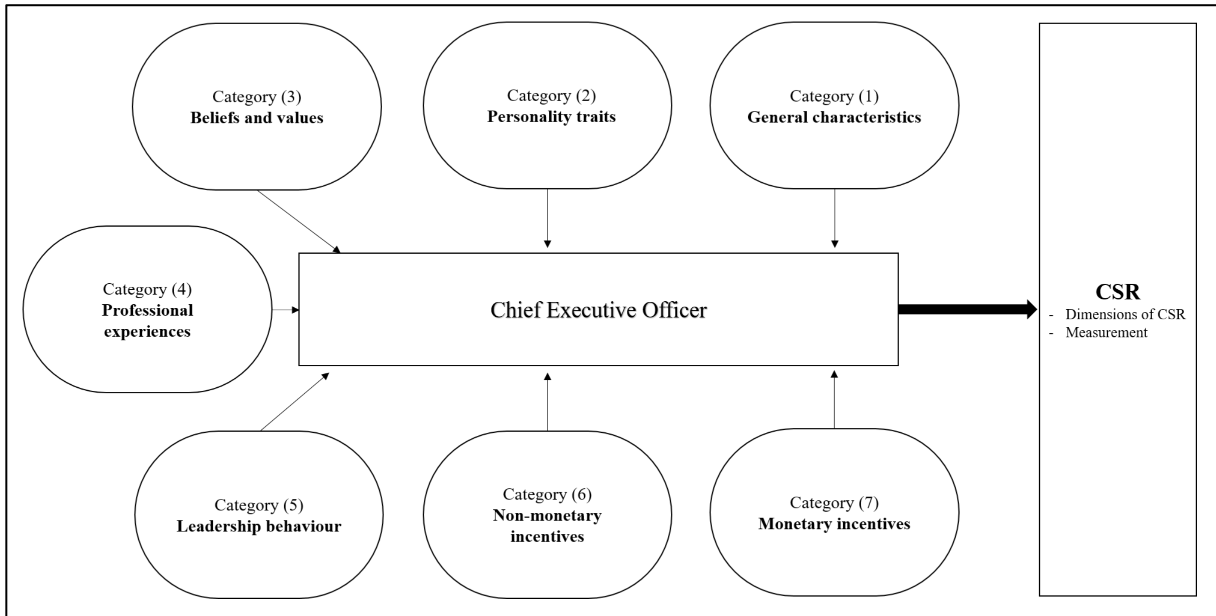

Figure B-3: Integrative framework for understanding CEO drivers of CSR

Before delving into our specific review findings, we provide an overview of the dominant theories used to explain the impact of CEO-related determinants on CSR performance. In line with the diversity of examined CEO drivers, the underlying theories varied notably. A basic distinction must be made in this context between studies that focused on rather personal, intrinsic-centred variables (category 1-5) and studies that concentrated on rather incentive-centred variables (category 6-7). For the former, the upper echelon theory was by far the most applied theory. In particular, 37 papers in our sample draw on this theory. The key assumption of the upper echelon theory is that organizational outcomes are reflections of the psychological traits, experiences, and values of the top management (Hambrick and Mason, 1984). Accordingly, many of the reviewed papers that applied upper echelon theory analysed the influence of specific psychological, value-based, and belief-centred variables like narcissism, religious beliefs, or international assignment on CSR as a major organizational strategy and outcome (e.g. Harjoto and Rossi, 2019; Petrenko et al., 2016; Slater and Dixon-Fowler, 2009). In contrast, the theory that was predominantly used to explain the influence of incentive-centred CEO variables on CSR was agency theory, which suggests that principals and agents have self-serving goals and desires that differ from each other (Eisenhardt, 1989). These differences may cause conflicts and harm the performance of the company. Consequently, various control

mechanisms can be introduced to lower the agency risk and align the interests of the agents and principals (Choi et al., 2020; McGuire et al., 2003). In this vein, several of the reviewed papers analysed the impact of monetary incentives on CSR engagement and whether specific compensation designs can further improve social performance (e.g. Chan and Ma, 2017; Mahoney and Thorne, 2005). Moreover, the influence of non-monetary incentives like CEO power or career horizon were also investigated via the theoretical basis of agency theory (e.g. Godos-Díez et al., 2020; Sheikh, 2019). Overall, 27 studies applied the agency theory. A third frequently used theory for explaining CSR engagement in our review was stakeholder theory. The main argument of this theory is that survival and firm performance are highly dependent on how well firms address stakeholder demands and react to social issues (Freeman, 1984). Other used theories were human capital theory, strategic leadership theory, signalling and stewardship theory. However, these theories were only used by very few papers. A total of 13 papers did not use any theory at all. Detailed overviews of the theories applied to the specific relationships are presented in Table B-7 – Table B-13.

B.4.2 The dependent variable CSR

B.4.2.1 Dimensions of CSR

CSR is a complex construct that encompasses different dimensions (Dahlsrud, 2008). In order to give a comprehensive overview of the current state of research in this field, we considered studies that examined the influence of CEO-related determinants on both corporations' complete CSR activities and performances, as well as activities and performances related to a specific CSR dimension.

As shown in Figure B-4, the vast majority of the reviewed articles focused on corporations' complete CSR performance as the dependent variable. Indeed, 77% of the studies examined the entire CSR performance, whereas 15% exclusively investigated environmental related activities and performance, and a relatively low proportion of 8% considered only social related activities and performance. Two main conclusions ensue from these observations. First, researchers made an effort to give a preferably complete overview of the influence of CEO drivers on CSR in their studies by incorporating all dimensions of CSR activities and performances. Second, since the great majority of studies focused on corporations' complete CSR activities, CSR data availability needs to be high for particular countries. If researchers first had to carry out extensive data collections, many would probably have concentrated on certain dimensions leading to higher proportions of studies on solely environmental or social related CSR activities.

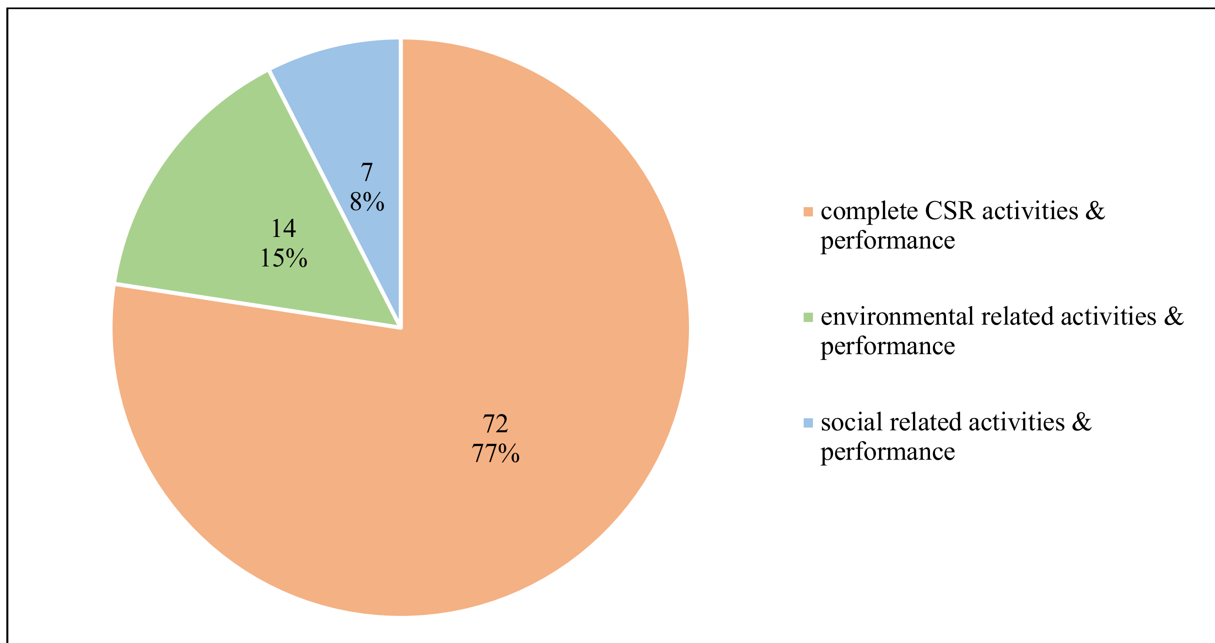

Figure B-4: Distribution of the articles by investigated CSR dimension

B.4.2.2 CSR measurement

A deeper analysis of the articles revealed that CSR was measured in various ways. In this context, it is certainly important to mention that the measurement of CSR is notoriously difficult (Carroll, 1991a). In particular, there are two main problems associated with the assessment. The first problem arises due to the qualitative nature of CSR: environmental, social, and governance issues provide only limited opportunities for a robust quantitative evaluation. The second challenge lies in the aggregation of the number of criteria, as CSR is a multidimensional concept. Any attempt to construct an overall CSR score is therefore difficult (Capelle-Blancard and Petit, 2017). However, during the last two decades, several CSR rating providers emerged that specialized in measuring CSR performance by evaluating environmental, social, and governance performances of listed companies. Even though there is sharp criticism about the underlying subjective rating processes as well as the often highly interpretable data sources (Entine, 2003), the general confidence in these ratings increased along with the growing demand for CSR information among academics and practitioners (Bouten et al., 2017). This development is also observable in our review sample, since the vast majority (84%) of the studies used CSR ratings from various databases for measuring their CSR variable. In contrast, only 11% of the articles conducted surveys to achieve information for the CSR measurement, and 6% used information from company reports. To ensure a comprehensible procedure, we grouped the articles into the three investigated CSR dimensions outlined in Section 4.2.1 to analyse the CSR measures.

All dimensions of CSR

Starting with the studies that investigated corporations' complete CSR activities, 52 studies used an aggregated overall CSR score for measuring the dependent variable. As shown in Table B-4, the majority (34) of these studies retrieved these scores from the MSCI ESG KLD database, which is regarded as one of the largest multidimensional corporate social performance databases available to the public (Deckop et al., 2006). Within this database a corporation's social performance is evaluated along seven major dimensions, namely environment, community, human rights, employee relations, diversity, product, and governance (Kim et al., 2012). Each dimension contains a set of strength and concern ratings. The latter are often used to represent poor social performance, while the strength ratings are considered as representing exemplary social performance (McGuire et al., 2003). Most of the studies using overall CSR scores from MSCI ESG KLD (17) aggregated the dimensional strength and concern scores into one overall net performance measure, mainly by subtracting the sum of all concerns from the sum of all strengths (some use slightly modified scores). However, there are also five papers that focused on the aggregated total strength and concern scores and another three articles that solely used the aggregated total strength score. Seven studies deployed both the total net CSR score and the total strength and concern scores as measures. Regarding the separation of strengths and concerns, there are two other studies that used database scores and made such a distinction. One article took the total CSR strength score from the China Stock Market and Accounting Research Database and the other the total CSR misconduct score from the CSR database of the Taiwan Economic Journal. All other studies in this category that relied on database information for measuring CSR performance utilized total net CSR scores. This needs to be seen as critical because there are two crucial weaknesses associated with the approach of aggregating CSR information. First, the operationalization through combining positive (strengths) and negative (concerns) dimensions, as offered by most databases (e.g. MSCI ESG KLD), leads to delusive averages. This is grounded in the fact that strengths can offset weaknesses when they are treated as same constructs (Mattingly and Berman, 2006; Strike et al., 2006). Delmas and Doctori Blass (2010), for example, have shown that firms in the chemical sector with higher levels of toxic releases and lower environmental compliance also tend to have the most advanced reporting and environmental management practices, thereby balancing out their overall CSR scores. The measure of CSR performance is thus likely to be biased if measured as an aggregated net score and a combination should be avoided (Capelle-Blancard and Petit, 2017). The second weakness arises from the aggregation of various CSR dimensions. In practice, the materiality of different CSR criteria is highly variable across

different industries and company characteristics. An equal weight approach, like that performed by a lot of databases, is therefore problematic because it leads to biased results (Capelle-Blancard and Petit, 2017). Due to growing criticism in this vein, some CSR data providers (e.g. MSCI ESG KLD or EIKON, formerly Thomson Reuters Asset4) adjusted their calculations for industry effects in recent years, yet the calculations are not transparent for third parties. Against these weaknesses, it is surprising that a total of 26 papers just use a single CSR score aggregated over various dimensions as well as strength and concerns for their analyses. Only one of these papers used a data envelopment analysis model to assign industry and company size dependent weights for the aggregation, and as a result reduced the aforementioned weaknesses.

A total of six studies used surveys to collect their CSR data. Three of these studies employed already established scales from previous literature, while the other three developed their own items. Even though surveys avoid the highly criticised shortcomings regarding data and rating process quality of database CSR scores (Entine, 2003), one general disadvantage is that the representativeness and the significance of the results are widely dependent on the answer rates (Sivo et al., 2006). Moreover, in the special context of CSR, a social desirability bias has to be assumed in the survey responses. The nature of the topic as well as its importance in the public eye may lead respondents to answer in a way that they perceive as socially acceptable (Godos-Díez et al., 2011). However, besides these methodological weaknesses, all survey articles also aggregated their survey responses into one overall CSR score without assigning different weights to the different dimensions.

In contrast to the 52 studies that used aggregated overall CSR scores, 20 studies employed separate CSR dimension scores to measure the corporations' CSR performance. As can be seen from Table B-4, 15 of them retrieved the scores from the MSCI ESG KLD database, two from the Korean Economic Justice Institute Index (KEJI), and the remaining from diverse databases. The majority of the studies using the MSCI ESG KLD database (six) employed the dimensional net scores as well as the aggregated total net score for measuring CSR, and thus still combined strength and concern scores. However, there are also three studies that used the dimensional strength/concern scores separately, as well as two studies that employed the dimensional strength score and thereby avoided the limitations of aggregated database CSR scores. The remaining four studies focused on the dimensional net scores and the total strength/concern scores.

Table B-4: Measurement of CSR for studies investigating complete CSR dimensions

Dependent variable (no. of studies; %)	Data source (no. of studies; %)	Measure
Aggregated overall CSR score (52; 56%)	MSCI ESG KLD database (34; 37%)	Total net score (16; 17%)
		Total net score determined by using a DEA-AR model based on strengths and concerns indicators (1; 1%)
		Total strength and concern score (5; 5%)
		Total strength score (3; 3%)
		Total net score; total strength and concern score (7; 8%)
		Total net score; net scores of dimensions aggregated into internal and external CSR (1; 1%)
		Total net score; total strength and concern score; net scores of dimensions aggregated into stakeholder and third-party CSR (1; 1%)
	RKS ratings (3; 3%)	Total CSR score
	CR index by BITC (Business in the Community) (1; 1%)	Overall ranking category
	China Stock Market and Accounting Research database (CSMAR) (1; 1%)	Total CSR strength
	Standard Ethics Rating (1; 1%)	Ordinal CSR ranking scores and dummy (ranking score EE or better vs. otherwise)
	Canadian CSID database (1; 1%)	Total net score
	CSR database of Taiwan Economic Journal (1; 1%)	Total CSR misconduct score
	CSR Ratings: the Global 100 by Corporate Knights, 100 Best Corporate Citizens by CRO magazine, the Most Ethical Companies by Ethisphere, and Green Ranking by Newsweek (1; 1%)	Not specified
	Most admired corporations' Ranking by Fortune (1; 1%)	Total CSR score
	Korean Economic Justice Institute (KEJI) Index (1; 1%)	Total CSR score
	not specified (1; 1%)	Number of sustainability indicators engaged by a firm where at least one indicator is part of the GRI analytics report (2017)
	Survey (6; 6%)	Individually developed questionnaires (3; 3%)
		Recourse to already established questionnaires (3; 3%)
Separate CSR dimension performance (20[a]; 22%)	MSCI ESG KLD database (15; 16%)	Total net score; dimension net scores (6; 7%)
		Total net score; dimension net scores; total strength and concern scores (4; 4%)
		Total net score; dimension net scores; dimensional strength and concern scores (1; 1%)
		Total net score; dimensional strength and concern scores (1; 1%)
		Dimensional strength and concern scores (1; 1%)

Dependent variable (no. of studies; %)	Data source (no. of studies; %)	Measure
		Total strength and concern score; dimensional strength score (1; 1%)
		Dimensional strength scores (1; 1%)
	KEJI Index (2; 2%)	Total CSR score; dimension scores (1; 1%)
		Dimension score; dummy (KEJI listed or not) (1; 1%)
	CSMAR (1; 1%)	Peripheral CSR score (log-transformed ratio of the relative value of corporate donation to total assets ×100 + 1)
	Company reports (1; 1%)	Embedded CSR score (logarithm of a company's green R&D investment to its total assets × 100)
	EIRIS database (1; 1%)	Total CSR score, dimensional CSR score
	HEXUN-RKS rating (1; 1%)	Total CSR score; dimensional CSR score
	Annual Survey of Corporate Giving from the Chronicle of Philanthropy website (1; 1%)	Average dollar amount of a firm's total charitable contributions

[a] Two studies use two data sources: Cha et al. (2019) use data from MSCI ESG KLD and the Annual Survey of Corporate Giving, while Chen et al. (2019b) use data from CSMAR and firms' annual reports.

Environmental dimension of CSR

As regulations and stakeholder pressures placed environmental issues on the agenda of most firms, the general importance of companies' environmental performance has increased over the last few decades (Kassinis and Vafeas, 2006). Consequently, environmental sustainability and performance has become a core issue for academics, resulting in a continuous increase in publications in this context (Birindelli et al. 2019). In line with this, we identified 14 studies that exclusively focus on the environmental dimension of CSR as the dependent variable. As presented in Table B-5, six of these studies used overall environmental performance measures, whereas three particularly examined environmental innovations as important drivers of overall environmental performance. Another two articles focus on environmental violations as indicators for environmental misbehaviour, while one study each employed environmentally responsible technologies, environmental investments, and green strategies as dependent CSR variables.

In general, the environmental performance assesses a corporations' degree of success in reducing its environmental impact (Klassen and McLaughlin, 1996). As mentioned above, there are several CSR rating agencies that provide detailed information on corporations' performance across all different CSR dimensions. Accordingly, three articles used total environmental scores from CSR rating providers, namely MSCI ESG KLD, Thomson Reuters, and S&P Global.

Moreover, one study employed a composite environmental performance index based on scores from MSCI ESG KLD, Trucost, and SAM database. The remaining two articles that focused on environmental performance as a dependent variable used information from governmental initiatives and environmental reports that companies had to submit to a governmental agency. Environmental innovation was measured in three different ways. One study took the environmental product innovation score of the Thomson Reuters Asset4 database, while two other studies conducted questionnaire surveys, with each using six items to measure environmental innovation. One study focused on the environmental process and product innovation, while the other placed focus on radical and incremental eco-innovation. The papers concentrating on environmental violations both used the number of environmental lawsuits as measure. Lastly, the study that used environmentally responsible technologies employed environmental information from the eGRID database, while the environmental protection investment was measured as reported in the company CSR reports. IT-based environmental strategies were measured via a four-item construct for IT-enabled green strategies as well as a six-item construct for green IT strategies, both adopted from Molla and Abareshi (2012).

Table B-5: Measurement of CSR for studies investigating the environmental dimension

Dependent variable (no. of studies; %)	Data source (no. of studies; %)	Measure
Environmental performance (6; 6%)	MSCI ESG KLD database (1; 1%)	Aggregated net score of all environmental strengths and concerns
	Thomson Reuters Asset4 database (1; 1%)	Total environmental score (comprised of emission reduction, resource reduction, and product innovation)
	Trucost (S&P Global) (1; 1%)	Environmental impact score (aggregated damage score)
	MSCI ESG KLD database, Trucost and Sustainable Asset Management (SAM) database (1; 1%)	Composite CEP index based on scores from the four databases
	Environmental reports submitted to the Danish Environmental Protection Agency (Green Accounting Program) (1; 1%)	Logarithm of electricity/ water/ gas consumption scaled by the number of employees
	CST (Certification for Sustainable Tourism) programme by the Costa Rican Ministry of Tourism (1; 1%)	1) Participation in CST programme; 2) percentage scores of beyond-compliance environmental performance assigned by the CST programme
Environmental innovation (3; 3%)	Thomson Reuters Asset4 database (1; 1%)	Score for environmental product innovation
	Survey (2; 2%)	Six-item measure that captures incremental and radical eco-innovation; six-item measure for environmental process and product innovation

Dependent variable (no. of studies; %)	Data source (no. of studies; %)	Measure
Environmental violations (2; 2%)	Public Access to Court Electronic Records database (PACER) (1; 1%)	1) Number of environmental lawsuits per year; 2) dummy (lawsuit or not)
	US Environmental Protection Agency's Docket database (1; 1%)	1) Dummy (violated environmental law or not); 2) number of times each firm was convicted of violating an environmental law
Environmentally responsible technologies (1; 1%)	eGRID database (1; 1%)	Share of electricity generated from renewable sources relative to total electricity generation
Environmental protection investment (1; 1%)	Company reports (1; 1%)	Reported total environmental protection investment
Green strategies (1; 1%)	Survey (1; 1%)	Six items for green IT strategies and four items for IT enabled green strategies (adapted from Molla and Abareshi, 2012)

Social dimension of CSR

Table B-6 provides an overview of the measures employed to capture firms' social engagements. The social dimension of CSR, which can be understood as the people-centric dimension, embraces activities and practices that address stakeholders' social concerns and benefit society as a whole (e.g. workplace quality, or respect for human rights) (Carroll, 1991b; Singh et al., 2017). In line with that, the seven studies of the review that solely focused on the social dimension employed philanthropic giving, labour friendly practices, human rights protection, and employee volunteer programmes as dependent CSR variables. The majority thereby examined the philanthropic giving behaviour of companies (CPG). For measuring, two articles used the total amount of CPG, one article employed the ratio of donations to total sales, while another article, which focused on the donation behaviour after an earthquake, took (1) the total amount of CPG in relation to total sales, (2) the temporal distance between donation pledge and the earthquake, and (3) the information disclosure of CPG. The other three studies in this category focused on labour-friendly practices as measured by the social insurance coverage of employees, human rights as measured by the MSCI ESG KLD human rights scores, and employee volunteer programmes as measured by a dummy variable, which captures whether a firm reports volunteer hours in a given firm-year or not. In sum, the focus on specific activities within the social CSR dimension allows for more accurate measures to be employed as fewer issues need to be covered. Therefore, we assess the applied measures as practical and precise.

Table B-6: Measurement of CSR for studies investigating the social dimension

Dependent variable (no. of studies; %)	Data source (no. of studies; %)	Measure
Philanthropic giving (4; 4%)	National Directory of Corporate Giving (1; 1%)	Log-transformed total amount of donations
	Corporate Foundation Profiles (1; 1%)	Total amount of donations
	Company reports (1; 1%)	1) Dummy variable capturing whether a firm donated or not; 2) log-transformed ratio of donations to total sales
	China Securities Regulatory Commission (CSRC) and company reports (1; 1%)	Ratio of donations to total sales, temporal distance between donation and earthquake in days, dummy variable capturing whether information disclosure of donation is available
Labour-friendly practice (1; 1%)	Survey (1; 1%)	Social insurance coverage of employees
Human rights (HR) (1; 1%)	MSCI ESG KLD database (1; 1%)	HR relation index score, HR net score, HR strength/ concern score
Employee volunteer programmes (1; 1%)	Company reports (1; 1%)	Dummy variable capturing whether firms report volunteer hours in a given year

B.4.3 The CEO-related driving forces of CSR

B.4.3.1 Variables related to general CEO characteristics

The influence of general CEO characteristics on CSR was examined by a total of 19 studies (see Table B-7). In particular, these studies focused on seven different explanatory variables, namely gender, cultural background, nationality, education, marital status, parenthood, and locality.

In terms of gender, the reviewed articles confirm the general assumption that it has an important influence on key corporate decisions. The studies largely show that female CEOs engage higher in overall CSR activities (Borghesi et al., 2014; Cronqvist and Yu, 2017; Hegde and Mishra, 2019; Huang, 2013; Manner, 2010; Zou et al., 2018), as well as environmental CSR (Birindelli et al., 2019; Cronqvist and Yu, 2017; Jiang and Akbar, 2018) and specific dimensions of social CSR, namely community and diversity. Moreover, Liu (2018) found a negative relationship between female CEOs and environmental violations, however, this association was not significant. Taken together, the results support the hypothesis that women express significantly more altruism than men (Dickinson and Tiefenthaler, 2002; Rigdon et al., 2009). This is based on the circumstance that women are typically raised to show higher sensitivity towards ethical issues (Simga-Mugan et al., 2005) and be more aware and compassionate regarding the needs of others (Carlson, 1972). However, it is important to mention that the studies of Hegde and

Mishra (2019), Cronqvist and Yu (2017), and Borghesi et al. (2014) could have a partial overlap because they all use U.S. samples, rely on MSCI ESG KLD data availability, do not focus on specific industries, and apply nearly identical time horizons.

People's decision making is essentially shaped by their personal values (Mitchell and Scott, 1990), which in turn are substantially influenced by the value system in which they grew up (Hofstede, 2001). Picking up on this general idea, three studies explored the influence of CEOs' nationality and cultural background on CSR performance. Huang (2013) and Rivera and De Leon (2005) focused on nationality in this context, which was measured as a dummy variable representing North American nationality in the case of Huang, and as a dummy variable representing industrialized countries by Rivera and De Leon (2005). However, both studies were unable to find a significant relationship to overall CSR or environmental CSR. In contrast, Naeem and Khurram (2019) explored Hofstede's cultural dimensions and found positive effects of CEOs belonging to individualistic and masculine cultures on the firm's engagement in CSR. This is quite surprising given the fact that in individualistic societies, individuals tend to care most for themselves. Naeem and Khurram offer a potential explanation for this phenomenon, which is that CEOs from individualistic cultures perform more CSR activities to meet their stakeholders' expectations and thereby remain legitimate.

Regarding education, there are two distinct ways in which it can shape CEOs. First, building on the notion that education promotes managerial efficiency, a higher education can enable CEOs to manage scarce resources better and have greater awareness of environmental and societal priorities (Amore et al., 2019). On the other hand, education can also shape values and behavioural beliefs for better and for worse (e.g. studies found that after taking one semester of microeconomics, students responded less honestly to ethical dilemmas (Frank et al., 1993)). Concerning the influence of education on CSR, the studies found mixed results. Three studies found evidence that higher CEO education is positively related to better environmental performance (Amore et al., 2019; Cho et al., 2019; Rivera and De Leon, 2005) and two studies confirmed a strong positive association with social CSR (Liu and Luo, 2019; Wei et al., 2018). Nevertheless, Lee et al. (2018b) observed a negative relationship between the education level and environmental CSR as well as no significant relationship to overall and social CSR topics. With regard to the concrete educational background, Huang (2013) and Slater and Dixon-Fowler (2010) presented a positive effect of MBA educated CEOs on overall CSR and environmental engagements. However, Wei et al. (2018) found a strong negative effect on philanthropic giving, while Manner (2010) did not find strong effects at all. Lastly, the studies of Manner (2010) and Roach and Slater (2016) confirmed the hypothesis that degrees in

humanities positively influence CSR performance, whereas degrees in economics were found to have a negative impact on overall CSR in Manner's study (2010) but a positive impact on environmental CSR in the study of Amore et al. (2019). So all in all, positive effects of educational level and degrees in humanities are acknowledged, but no clear conclusions can be drawn for business degrees.

Besides attributable variables of CEOs such as gender, prior research has also demonstrated the importance of the family environment in shaping an individual's behaviour. In line with this research stream, Hegde and Mishra (2019) and Cronqvist and Yu (2017) focused on marital status and the existence of children as explanatory variables for CSR engagement. Hegde and Mishra hypothesized that marriage potentially operates as a catalyst for promoting pro-social values and behaviours and thus leads to higher CSR performances of married CEOs. Their results show strong support for this hypothesis. In particular, they were able to find significant positive associations between married CEOs and overall CSR, CSR strength, and the diversity dimension. With regard to other dimensions, the product, employee, environment, and community dimensions were also positively related to married CEOs, but not statistically significant. Cronqvist and Yu (2017) relied on similar argumentation for the effect of CEOs' parenthood on CSR engagement. Interestingly, they found that a positive relationship between parenthood and CSR performance is only observable in the case of CEOs raising a daughter. In terms of CSR dimensions, the relationship is strong for diversity, employee, and environment. Since women have stronger other-regarding preferences (Beutel and Marini, 1995), the results suggest that CEOs internalize their daughters' preferences (Warner, 1991), which in turn influences their decision-making regarding CSR issues.

Moreover, Lai et al. (2020) found strong positive relationships between CEOs' locality and environment, community, and employee CSR dimensions. This is in line with the assumption that people are likely to make proactive contributions to places for which they have a deep feeling (e.g. their hometowns), and care deeply about the welfare and well-being of the local people (Thompson Fullilove, 1996; Vaske and Kobrin, 2001).

Table B-7: Overview of research findings on general characteristics

Independent variables	Dependent variables	Theoretical foundation	Findings
Gender	Overall CSR	Stakeholder theory; not specified	Huang, 2013 (+); Borghesi et al., 2014 (+); Hegde & Mishra, 2019 (+); Cronqvist & Yu, 2017 (+)
	CSR strength	Upper echelon theory; stakeholder theory; not specified	Manner, 2010 (+); Zou et al., 2018 (+)
	CSR concerns	Upper echelon theory; stakeholder theory	Manner, 2010 (o)
	CSR dimensions (community/ diversity/ employee/ humanitarian/ product)	Not specified	Borghesi et al., 2014 (+/ +/ o/ o/ o); Cronqvist & Yu, 2017 (o/ +/ o/ o/ +)
	Environmental CSR	Homophily theory; not specified (2)	Birindelli et al., 2019 (+); Borghesi et al., 2014 (o); Cronqvist & Yu, 2017 (+)
	Environmental protection investments	Upper echelon theory; theory of feminist care ethics	Jiang & Akbar, 2018 (+)
	Environmental violation	Gender socialization theory	Liu, 2018 (o)
Cultural background (individualism/ power distance/ masculinity/ uncertainty avoidance/ long-term orientation)	Overall CSR	Stakeholder and legitimacy theory	Naeem & Khurram, 2019 (+ / o/ +/ o/ o)
Nationality	Overall CSR	Stakeholder theory	Huang, 2013 (o);
	Environmental CSR	Not specified	Rivera & De Leon, 2005 (o)
Educational level	Overall CSR	Stakeholder theory; upper echelon theory	Lee et al., 2018b (o)
	CSR dimensions (community/ diversity/ employee/ environment/ product)	Stakeholder theory; upper echelon theory	Lee et al., 2018b (o/ o/ o/ -/ o)
	Environmental CSR	Upper echelon theory (2); stakeholder theory; institutional theory	Slater & Dixon-Fowler, 2010 (o); Cho et al., 2019 (+); Rivera & De Leon, 2005 (+); Amore et al., 2019 (+)
	Social CSR (philanthropic giving; labour-friendly practice)	Upper echelon theory	Wei et al., 2018 (+); Liu & Luo, 2019 (+)
Education (no university degree/ BA/ BS/ MS/ MA/ PhD science/ PhD non-science)	Overall CSR	Stakeholder theory	Huang, 2013 (o/ o/ o/ +/ o/ o/ o)
MBA	Overall CSR	Stakeholder theory	Huang, 2013 (+)
	CSR strength	Stakeholder theory; upper echelon theory	Manner, 2010 (o)
	CSR concern	Stakeholder theory; upper echelon theory	Manner, 2010 (o)
	Environmental		Slater & Dixon-Fowler, 2010 (+)

Independent variables	Dependent variables	Theoretical foundation	Findings
	Social CSR (philanthropic giving)	Upper echelon theory	Wei et al., 2018 (-)
Bachelor (humanities/ non-eco social sciences/ economics/ business)	Overall CSR	Upper echelon theory	Roach & Slater, 2016 (+/n.a./ n.a./ n.a.)
	CSR strength	Stakeholder theory; upper echelon theory	Manner, 2010 (+/ o/ -/ o)
	CSR concern	Stakeholder theory; upper echelon theory	Manner, 2010 (o/ o/ o/ o)
Bachelor (humanities)	CSR dimensions (community/ diversity/ employee/ environment/ product)	Upper echelon theory	Roach & Slater, 2016 (+/ +/ o/ o/ o)
Field of study (business adminis./ humanities/ hotel tourism/ environmental mgmt)	Environmental CSR	Not specified	Rivera & De Leon, 2005 (o/o/ o/ +)
Field of study (business/ technical/ other)	Environmental CSR	Not specified	Amore et al., 2019 (+/o/ o)
Marital status	Overall CSR	Not specified	Hegde & Mishra, 2019 (+)
	CSR strength		Hegde & Mishra, 2019 (+)
	CSR concern		Hegde & Mishra, 2019 (o)
	CSR dimensions (product/ diversity/ human rights/ environment/ employee/ community)		Hegde & Mishra, 2019 (o/ +/ o/ o/ o/ o)
Parenthood (daughter/ son/ number of children)	Overall CSR	Not specified	Cronqvist & Yu, 2017 (+/ o/ o)
Parenthood (daughter)	CSR dimensions (community/ diversity/ employee/ environment/ humanitarian/ product)	Not specified	Cronqvist & Yu, 2017 (o/ +/ +/ +/ o/ o)
Locality	CSR dimensions (environment/ community/ employee)	Place attachment theory	Lai et al., 2020 (+/ +/ +)

Notes: (+) = positive influence of independent variable on dependent variable, (o) = no significant influence, (-) = negative influence.

B.4.3.2 Variables related to CEO personality traits

Thirteen studies of our sample analysed the impact of personality traits on CSR performance (see Table B-8). In doing so, they primarily followed the upper echelons theory, which states that psychological traits, experiences, and values of the top management can explain major organizational decisions, actions, and outcomes (Hambrick and Mason 1984).

Narcissism represents the most frequently examined trait. In line with the general assumption that narcissistic CEOs engage in CSR initiatives to gain positive attention and thus satisfy their strong need for applause, affirmation, and adulation (Liu et al., 2017; Petrenko et al., 2016), Al-Shammari et al. (2019), Petrenko et al. (2016), and Tang et al. (2018) all found significant positive effects of narcissistic CEOs on overall CSR performance. Petrenko et al. (2016) further

confirmed these results by showing that narcissism is positively and significantly related to CSR strengths, yet negatively and significantly related to CSR concerns. However, what is particularly interesting is that more granular examinations of the impact of narcissism on specific CSR aspects, as performed by Chen et al. (2019a) and Al-Shammari et al. (2019), show that narcissistic CEOs primary engage in externally directed CSR activities that are easy to implement. This confirms that they mainly act for the limelight rather than engaging in CSR for the purpose of doing good. The results of Myung et al. (2017) seem at first glance not to confirm these insights. However, a closer look at the variable definition and measurement reveals that "CSR to business" represents the companies' commitment to their customers as well as their compliance with legal regulations, thus the positive significant relationship between CEO narcissism and CSR to business again demonstrates the external orientation of narcissistic CEOs and their engagement in easily implementable activities. Only the study of Lin et al. (2018) found a negative relationship between narcissism and CSR. A potential explanation could be the focus on mega project CSR. Mega projects represent risky engagements that may lead CEOs to emphasize their ability to achieve high economic performance rather than their socially responsible behaviour to earn attention (Lin et al., 2018).

Besides narcissism, the study of Myung et al. (2017) also focused on the other two traits belonging to the dark triad of personality, namely Machiavellianism and psychopathy, and their influence on CSR activities. Along with the common knowledge that psychopaths are concerned with tactical aspects rather than strategic interests and the long term, they found significant negative relationships between Machiavellianism-psychopathy and all investigated CSR aspects.

Hubris is another examined personality trait that describes individuals with exaggerated self-confidence and self-worthiness that deviates from objective standards and leads to the overestimation of one's own abilities (Hayward and Hambrick, 1997). As for the effect of a CEO's hubris on CSR, two hypotheses are plausible. First, hubristic CEOs regularly overestimate themselves and therefore assume that the success of their company is less dependent on stakeholders and more on themselves. Consequently, they do not see a high need to respond to stakeholder demands and in turn engage less in CSR activities (Tang et al., 2015b). On the other hand, the strong belief of hubristic CEOs in their superiority regarding the management of difficult tasks coupled with their overestimation of probabilities of success from innovative efforts leads them to allocate more valuable resources to key innovations, including CSR-related innovations (Tang et al., 2015a). The studies of Arena et al. (2018), Tang et al. (2015a), and Tang et al. (2018) confirm these hypotheses. In particular, Arena et al. (2018)

show a positive relationship between hubris and environmental innovation, whereas the studies of Tang et al. (2015a, 2018) demonstrate the negative influence of hubris on overall CSR as well as CSR strengths and the positive influence on CSR concerns. The articles of McCarthy et al. (2017), Sauerwald and Su (2019), and Park et al. (2020) are also in line with these assumptions. The studies examined the effect of overconfidence on CSR, but since overconfidence is related to hubris and both constructs differ only slightly (Hayward and Hambrick, 1997), the same effects can be expected.

Charismatic individuals are characterised by their profound and extraordinary effects on followers as well as their ability to note and act upon the needs of their followers (House and Baetz, 1979). Along with this, Wowak et al. (2016) hypothesized that charismatic CEOs will favour CSR initiatives that benefit a wide range of stakeholders, and found strong support in their sample.

The study of Sajko et al. (2020) explored the influence of CEO greed on CSR. Greed can be described as an excessive materialistic desire to acquire wealth (Wang and Murnighan, 2011) and is commonly perceived as the dark end of the self-interest continuum (Haynes et al., 2017). On the basis of the expectation that greedy CEOs are not willing to accept short-term financial sacrifice to invest in social issues, Sajko et al. found a strong negative relationship between CEO greed and a firm's CSR.

Table B-8: Overview of research findings on personality traits

Independent variables	Dependent variables	Theoretical foundation	Findings
Narcissism	Overall CSR	Upper echelon theory/ agency theory	Al-Shammari et al., 2019 (+), Petrenko et al., 2016 (+), Tang et al., 2018 (+)
	Overall mega project CSR	Upper echelon theory	Lin et al., 2018 (-)
	External CSR (dimensions: environment, community, philanthropic)	Upper echelon theory	Al-Shammari et al., 2019 (+)
	Internal CSR (dimensions: employee relations, diversity)	Upper echelon theory	Al-Shammari et al., 2019 (o)
	Peripheral CSR (separated from companies' operations)	Upper echelon theory/ attention-based view	Chen et al., 2019a (+)
	Embedded CSR (integrated in companies' operations)	Upper echelon theory/ attention-based view	Chen et al., 2019a (-)
	CSR to employees	Not specified	Myung et al., 2017 (o)
	CSR to society and environment	Not specified	Myung et al., 2017 (o)
	CSR to business	Not specified	Myung et al., 2017 (+)

Independent variables	Dependent variables	Theoretical foundation	Findings
	CSR strength	Upper echelon theory/ agency theory	Petrenko et al., 2016 (+)
	CSR concern	Upper echelon theory/ agency theory	Petrenko et al., 2016 (-)
Machiavellianism-Psychopathy	CSR to employees	Not specified	Myung et al., 2017 (-)
	CSR to society and environment	Not specified	Myung et al., 2017 (-)
	CSR to business	Not specified	Myung et al., 2017 (-)
Hubris	Overall CSR	Upper echelon theory	Tang et al., 2018 (-)
	CSR strength	Upper echelon theory/ stakeholder theory	Tang et al., 2015a (-)
	CSR concern	Upper echelon theory/ stakeholder theory	Tang et al., 2015a (+)
	Environmental innovation	Upper echelon theory	Arena et al., 2018 (+)
Overconfidence	Overall CSR	Stakeholder theory, n.a.	McCarthy et al., 2017 (-), Park et al., 2020 (-)
	CSR decoupling	Not specified	Sauerwald & Su, 2019 (+)
Charisma	Overall CSR	Upper echelon theory, charismatic leadership theory	Wowak et al., 2016 (+)
Greed	Overall CSR	Upper echelon theory	Sajko et al., 2020 (-)

Notes: (+) = positive influence of independent variable on dependent variable, (o) = no significant influence, (-) = negative influence.

B.4.3.3 Variables related to CEOs' beliefs and values

The potential impact of CEOs' beliefs and values was covered in 12 studies (see Table B-9). For example, Chin et al. (2013) and Gupta et al. (2019) examined the effect of CEOs' political ideology on CSR and both found that liberalism is positively related to higher advances in CSR. Jeong and Kim (2020) further supported these results by showing that CEO liberalism has a positively significant effect on CSR strength and a negatively significant effect on CSR concerns. This is in line with the general association of liberal ideology and its preferences for equality, social change, and shared responsibility (Jost et al., 2003; Skitka and Tetlock, 1993). Nevertheless, it should be noted that all three studies used the same measurement for political orientation (donations to parties), relied on CSR data from the MSCI ESG KLD database, and focused on U.S. samples that partially overlapped in their time periods. Therefore, it is likely that parts of the results are convergent because they represent the same sample. In contrast, Jia and Zhang (2013) had a slightly different focus on CEOs' political affiliation level in the Chinese context. They found that political affiliation has a positive and significant relationship with a firm's donations to government-sanctioned causes, thereby confirming that CEOs at

higher administrative levels are better trained in institutional values and perceive compromise with government as important.

A total of four studies used the religiosity of CEOs as an explanatory variable for CSR, hypothesizing that religious beliefs will lead executives to attach higher importance to the needs of stakeholders and common good following their religious doctrine (Cui and Jo, 2019; Harjoto and Rossi, 2019; Liao et al., 2019; Liu and Luo, 2019). Harjoto and Rossi (2019) focused on Italian firms and the Catholic faith, finding that religious CEOs increase the CSR performance and probability of having high ethical standards, although their results were not significant. In contrast, Cui and Jo (2019) as well as Liu and Luo (2019) explored the influence of religiosity on social dimensions of CSR, namely human rights practices and labour-friendly practices. Both studies were able to find significant positive relationships, Cui and Jo (2019) with regard to Christian religiosity and Liu and Luo (2019) to general religiosity. Liao et al. (2019) differentiated between eastern (Buddhism and Taoism) and western (Christianity and Islam) religions, examining their effect on incremental and radical eco-innovation. They showed that eastern (western) religious beliefs have a positive (negative) effect on incremental eco-innovation, whereas radical eco-innovation was positively (negatively) influenced by western (eastern) religious beliefs. So all in all, this study also confirmed the positive relationship between religious beliefs and CSR.

A negative effect of internal values was shown by Davidson et al. (2019) for CEO materialism, as well as by Jiraporn and Chintrakarn (2013a) for lucky CEOs defined as opportunistic CEOs who have the power to circumvent governance mechanisms and enhance private benefits. Given the fact that both materialism and opportunism are related to lower levels of concern about the environment and others (Kasser, 2016; Kilbourne and Pickett, 2008), the results confirm the expectations.

Cha et al. (2019) argued that CEOs with high degrees of civic engagement are passionate about several social challenges and are more likely to use their personal financial resources, time, and expertise to support these concerns. In line with that, the authors found that high civic engagement was a significantly positive predictor of corporate philanthropy and environmental performance. However, no strong support was found for community engagement activities.

In a similar vein, Werbel and Carter (2002) hypothesized that CEO membership to non-profit organizations is associated with corporate foundations that donate to related causes. The authors found strong support for this hypothesis with regard to philanthropic giving to arts and international groups, but no significant support for educational institutions and community groups.

Table B-9: Overview of research findings on beliefs and values

Independent variables	Dependent variables	Theoretical foundation	Findings
Political ideology (liberalism)	Overall CSR	Upper echelon theory	Chin et al., 2013 (+); Gupta et al., 2019 (+)
	CSR strength	Upper echelon theory	Jeong & Kim, 2020 (+)
	CSR concern	Upper echelon theory	Jeong & Kim, 2020 (-)
Political affiliation level	Social CSR (donations)	Strategic donation theory	Jia & Zhang, 2013 (+)
Religiosity	Overall CSR	Upper echelon theory	Harjoto & Rossi, 2019 (o)
	Environmental innovation	Upper echelon theory	Liao et al., 2019 (+)
	Social CSR (human rights; labour-friendly practice)	Religious morality hypothesis; stakeholder theory	Cui & Jo, 2019 (+); Liu & Luo, 2019 (+)
Materialism	Overall CSR	Ethical theory	Davidson et al., 2019 (-)
	CSR strength		Davidson et al., 2019 (-)
	CSR concern		Davidson et al., 2019 (+)
	CSR dimensions (community/ diversity/ employee/ environment/ product)		Davidson et al., 2019 (-/ -/ -/ -/ -)
Luck (opportunism)	Overall CSR	Over-investment/ conflict resolution theory	Jiraporn & Chintrakarn, 2013a (-)
Civic engagement	CSR dimensions (philanthropic/ community/ environment)	Upper echelon theory, stakeholder theory	Cha et al., 2019 (+/o/+)
Membership in non-profit organizations (arts group/ educational affiliation/ international organization/ Chamber of Commerce)	Social CSR (philanthropic giving to arts/ educational institutions/ international groups/ community groups)	Stewardship/ agency theory	Werbel & Carter, 2002 (+/o/+/o)

Notes: (+) = positive influence of independent variable on dependent variable, (o) = no significant influence, (-) = negative influence.

B.4.3.4 Variables related to CEOs' professional experiences

Relatively few studies have assessed variables related to CEOs' professional experiences as determinants of firms' CSR engagement (see Table B-10). Following the argumentation that more capable CEOs are better able to deal with uncertainty and therefore are less likely to be deterred by the uncertainty conjoined with CSR investments, Yuan et al. (2019) and García-Sánchez et al. (2019) focused on CEO ability as an explanatory variable. Both studies used the ability measure of Demerijian et al. (2012), which assesses the ability of CEOs to transform resources efficiently to revenue compared with the firm's industry competitors, and show

significant positive relationships between ability and CSR performance. Yuan et al. (2019) went further and also investigated separately the relationship between CEO ability and CSR strengths and concerns. The results are in line, showing positive relationships to CSR strengths and negative relationships to CSR concerns. However, in the context of these results, it is noteworthy that both studies used U.S. samples with nearly same time horizons, used the same measurement of the ability variable, and CSR scores from the MSCI ESG KLD database. Taking these facts together, it is likely that both studies have a high overlap of investigated samples, thereby limiting the general applicability of the results.

Chen et al. (2020) focused on exploring the relationship between general managerial skills and CSR performance. Generalist CEOs stand out for managerial skills that are transferable across different sectors and allow them to benefit from a favourable job market (Giannetti, 2011). In comparison with specialist CEOs who are characterized by their industry- or firm-specific skills, generalist CEOs are more likely to engage in "job hopping" and are therefore less contingent on the companies' future prosperity and growth. Short-term payoffs that go along with inflation of current performance are more in their focus than long-term payoffs that enhance sustainability (Custódio et al., 2013). Contributing to this notion, Chen et al. (2020) found a significant negative relationship between general managerial skills and overall CSR performance.

Slater and Dixon-Fowler (2009) as well as Shahab et al. (2020) concentrated, inter alia, on the international assignment experience of CEOs in their studies, relying on the assumption that international deployment will shape and expand CEOs' horizons in the way that they are provided with rare and valuable resources, improved awareness of societal expectations, and strengthened or altered personal values (Slater and Dixon-Fowler, 2009). Indeed, they were able to show that international assignment experience of CEOs is positively associated with overall CSR performance, CSR strengths, and environmental CSR. However, they could not find a corresponding relationship for CSR concerns. Moreover, Slater and Dixon-Fowler (2009) found, just like Thomas and Simerly (1994), that a CEO's output functional background (emphasis on externally-oriented activities like marketing, sales, etc.) has a significantly positive effect on overall CSR. Cho et al. (2019) further confirmed these results for environmental CSR, while Thomas and Simerly (1994) also showed that throughput functional background (emphasis on internally-oriented functions like accounting, production, etc.), on the other hand, is connected with lower overall CSR performance.

Shahab et al. (2020) also investigated the influence of research background and financial expertise on overall and environmental CSR. They argue that research background and financial

expertise lead to better knowledge about the general positive implications of pursuing environmental policies and the positive effect it may have on investors and stakeholders. Therefore, such CEOs may be more influential in the implementation of sustainable and environmental policies, which in turn leads to an enhancement of the associated performance. In line with that, they found that research background was significantly and positively associated with overall and environmental CSR, and financial expertise was significantly and positively related to overall CSR. A strong positive relationship between financial expertise and environmental CSR could not be confirmed.

The last study in this category, that of Walls and Berrone (2017), found that experience with particular environmental issues influences individuals' environmental behaviour in the way that they develop higher environmental values, which they also put into action.

Table B-10: Overview of research findings on professional experiences

Independent variables	Dependent variables	Theoretical foundation	Findings
Ability	Overall CSR	Upper echelon theory; not specified	García-Sánchez et al., 2019 (+); Yuan et al., 2019 (+)
	CSR strength	Upper echelon theory; not specified	García-Sánchez et al., 2019 (+); Yuan et al., 2019 (+)
	CSR concern	Upper echelon theory; not specified	García-Sánchez et al., 2019 (-); Yuan et al., 2019 (-)
General managerial skills	Overall CSR	Human capital theory	Chen et al., 2020 (-)
International assignment experience	Overall CSR	Upper echelon theory	Slater & Dixon-Fowler, 2009 (+); Shahab et al., 2020 (+)
	CSR strength	Upper echelon theory	Slater & Dixon-Fowler, 2009 (+)
	CSR concern	Upper echelon theory	Slater & Dixon-Fowler, 2009 (o)
	Environmental CSR	Upper echelon theory	Shahab et al., 2020 (+)
Functional background (output function)	Overall CSR	Upper echelon theory; strategic leadership theory/ upper echelon theory	Slater & Dixon-Fowler, 2009 (+); Thomas & Simerly, 1994 (+)
	CSR strength	Upper echelon theory	Slater & Dixon-Fowler, 2009 (o)
	CSR concern	Upper echelon theory	Slater & Dixon-Fowler, 2009 (o)
	Environmental CSR	Upper echelon theory/ institutional theory	Cho et al., 2019 (+)
Research background	Overall CSR	Upper echelon theory	Shahab et al., 2020 (+)
	Environmental CSR	Upper echelon theory	Shahab et al., 2020 (+)
Financial expertise	Overall CSR	Upper echelon theory	Shahab et al., 2020 (+)
	Environmental CSR	Upper echelon theory	Shahab et al., 2020 (o)
Informal environmental expert power	Environmental impact	Not specified	Walls & Berrone, 2017 (-)

Notes: (+) = positive influence of independent variable on dependent variable, (o) = no significant influence, (-) = negative influence.

B.4.3.5 Variables related to CEOs' leadership behaviour

A total of seven studies investigated the influence of different leadership behaviours on companies' CSR performance (see Table B-11). Four studies focused on bright leadership patterns namely ethical, charismatic, and visionary leadership, as well as intellectual stimulation, integrity, and steward profiles. These patterns have in common that they are all characterized by their focus on moral values that emphasize the cooperative behaviour in the interest of the company and its stakeholders rather than increasing one's own benefit (Bass, 1985; Brown et al., 2005; Davis et al., 1997). Consequently, all researchers hypothesized that firms with CEOs who demonstrate positive leadership behaviour will have higher levels of CSR performances. All studies found strong support for this hypothesis (Godos-Díez et al., 2011; Waldman et al., 2006b; Wu et al., 2015) except that of Waldman et al. (2006a), which only found a significantly positive relationship between CEO intellectual stimulation and strategic CSR but no significant relationship to social CSR. Moreover, they could not identify a significant relationship between charismatic leadership and strategic/social CSR.

Kassinis and Panayiotou (2006) argued that the CEOs' perceptions of the importance of stakeholder groups in environmental decision making are reflected in their companies' environmental performance, in the way that higher perceived importance leads to decreased environmental litigation. In line with this, their results confirmed a significantly negative influence of perceived importance of shareholders, regulators, and communities on environmental litigation. However, no significant evidence was found for employees.

The last examined topic with regard to leadership behaviour was the regulatory focus of CEOs. Regulatory focus describes the way individuals control their own actions and minds in the process of achieving goals (Higgins, 1997). Generally, there are two types of regulatory focus: the promotion focus, which is characterized by motivating individuals to concentrate on growth, ideals, and desirable end-states (Lanaj et al., 2012), and the prevention focus, which leads individuals to focus on avoiding punishment, failure, and undesirable end-states (Cho et al., 2014). Building on upper echelon and regulatory focus theories, Liao and Long (2018) found a positively significant influence of promotion focus on environmental innovation and a negatively significant influence of prevention focus on environmental innovation. Further confirming these results, Gamache et al. (2020) also observed a positively significant relationship between promotion focus and CSR strength. Taken together, these results show that promotion-focused CEOs forward CSR activities due to their desire to grow and their positive attitude towards encountering risks for achieving ideal goals (Stroessner et al., 2015),

whereas the high need for security and the focus on avoiding potential losses discourages prevention-focused CEOs from engaging in CSR activities (Liao and Long, 2018).

Table B-11: Overview of research findings on leadership behaviour

Independent variables	Dependent variables	Theoretical foundation	Findings
Ethical leadership	Overall CSR	Upper echelon theory	Wu et al., 2015 (+)
Charismatic leadership	Strategic CSR (environment, product quality, other, employee relations, and military)	Transformational leadership theory	Waldman et al., 2006a (o)
	Social CSR (community, diversity)	Transformational leadership theory	Waldman et al., 2006a (o)
Visionary leadership	Shareholder CSR	Neo-charismatic leadership	Waldman et al., 2006b (+)
	Stakeholder CSR		Waldman et al., 2006b (+)
CEO intellectual stimulation	Strategic CSR (environment, product quality, other, employee relations, and military)	Transformational leadership theory	Waldman et al., 2006a (+)
	Social CSR (community, diversity)	Transformational leadership theory	Waldman et al., 2006a (o)
Leader integrity	Shareholder CSR	Neo-charismatic leadership	Waldman et al., 2006b (+)
	Stakeholder CSR		Waldman et al., 2006b (+)
Steward manager profile	Overall CSR	Stewardship/ agency theory	Godos-Díez et al., 2011 (+)
Perceived importance of stakeholder groups (shareholders/ regulators/ communities/ employees)	Environmental litigation	Upper echelon theory	Kassinis & Panayiotou, 2006 (-/-/-/o)
Regulatory focus (promotion/prevention)	Environmental innovation	Upper echelon theory, regulatory focus theory	Liao & Long, 2018 (+/-)
Regulatory focus (promotion)	CSR strength	Regulatory focus theory	Gamache et al., 2020 (+)

Notes: (+) = positive influence of independent variable on dependent variable, (o) = no significant influence, (-) = negative influence.

B.4.3.6 Variables related to CEOs' non-monetary incentives

The category of non-monetary incentives comprises the explanatory variables of CEO tenure, age, career horizon, power, succession, media exposure, celebrity status, and founder family member (see Table B-12). Starting with the influence of CEO tenure on CSR performance, our review revealed mixed results. Five studies found a significantly negative relationship with overall CSR (Chen et al., 2019b; Choi et al., 2020; Godos-Díez et al., 2020; Khan et al., 2020; Lee et al., 2018b), thereby supporting the hypothesis that CEOs have strong incentives to signal their ability in the early years of tenure to mitigate career concerns (Fama, 1980; Hermalin and Weisbach, 1998). However, two articles documented a significantly positive influence (Huang,

2013; Thomas and Simerly, 1994) in line with the argument that CEOs gain better knowledge of their various stakeholders within tenure and thus are more likely to engage in CSR through effective stakeholder management (Oh et al., 2018). Contrary to this, one other study found no significant correlation at all (Li et al., 2016). Oh et al. (2018) went further and performed a more granular analysis by differentiating between CSR concerns and strengths, showing that tenure was negatively related to CSR concern but not significantly related to strength. These results suggest that CEO tenure does not lead to higher CSR, but it does lead to lower corporate social irresponsibility. Interestingly, with a view towards different CSR dimensions, the review studies' found a rather positive association with environmental CSR (Arena et al., 2018; Cho et al., 2019), while the association with social CSR was rather negative (Marquis and Lee, 2013).

Argumentatively close hypotheses can be derived for the association of age/ career horizon and CSR, due to their construct similarity. On the one hand, the extant literature typically suggests that older CEOs who are closer to retirement are less likely to make major strategic investments, since the probability of reaping the financial rewards of their investments is low (Barker and Mueller, 2002; Oh et al., 2016), hereby proposing a negative relationship between age/ career horizon and CSR. However, on the other hand, people tend to be less self-interested and more socially concerned as they get older and approach retirement (Ortiz-de-Mandojana et al., 2019). Also, older CEOs often want to leave a lasting legacy and therefore engage in more CSR activities (Sonnenfeld, 1986). The analysed studies mainly found support for the first hypothesis by showing that longer career horizons have a positive influence and age has a negative influence on overall CSR (Borghesi et al., 2014; Fabrizi et al., 2014; Kang, 2016). However, with regard to age it should also be noted that four studies did not find any support for a significant influence (Chen et al., 2019b; Huang, 2013; Kang, 2016; Lee et al., 2018b). In terms of different CSR dimensions, the results were rather mixed. Ortiz-de-Mandojana et al. (2019) showed a significant negative effect of career horizon on environmentally responsible technologies, while Fabrizi et al. (2014) demonstrated a positive effect on environmental performance. Social CSR, in particular the diversity and humanitarian dimension, was negatively influenced by CEO age in the article of Borghesi et al. (2014), and similarly the employee dimension has been shown to be positively influenceable by career horizon (Fabrizi et al., 2014). Conversely, for other social dimensions like community, a significant effect could not be shown.

With regard to CEO power, the majority of the studies found that CEO power is negatively related to overall CSR, thus indicating that powerful CEOs who are secured in their positions

tend to reduce CSR instead of investing in it to enhance their personal reputation and acting in the best interests of their stakeholders (Harper and Sun, 2019; Ji et al., 2019; Jiraporn and Chintrakarn, 2013b; Li et al., 2016; Sheikh, 2019). In terms of different dimensions, Fabrizi et al. (2014) found significant positive effects of power on environmental CSR and employee related CSR, while Sheikh (2019), Ji et al. (2019), and Harper and Sun (2019) all showed negative significant relationships to environmental CSR and most social CSR dimensions (employee, community, diversity). Important to mention is, that the results should be seen in light of the following two facts. First, the studies used different measures for CEO power. While Jiraporn and Chintrakarn (2013b), Ji et al. (2019), Harper and Sun (2019), and Li et al. (2016) relied on Bebchuk et al.'s (2011) argumentation and employed CEO pay slice as proxy for CEO power, Sheikh (2019) used an index that comprises structural, ownership, and expert power variables, and Fabrizi et al. (2014) measured power based on CEO tenure and duality. It is probably due to this discrepancy that the results of Fabrizi et al. (2014) represent an outlier. Second, there is a partial overlap in the samples of Jiraporn and Chintrakarn (2013b) and Harper and Sun (2019) due to the use of same databases, measures, almost same time horizons, and same focus on U.S. firms.

Two studies explored the influence of CEO succession on CSR. Newly appointed CEOs typically bring new approaches to organizational issues as they are less constrained by existing company practices and more open to trying new strategies (Bantel and Jackson, 1989; Giambatista et al., 2005). Moreover, CSR is an effective tool to acquire social legitimacy (Liu, 2020) and, since they have longer horizons, CEOs can benefit more greatly from investments in the future performance. In support of these notions, both studies found significant positive influences of succession on post-succession CSR performance (Chiu and Walls, 2019; Liu, 2020). Chiu and Walls (2019) also explored the effect for different dimensions of CSR and showed strong positive relationships to environment, employee, product, and human rights dimensions.

Comparably little attention has been paid to the influence of CEOs' media exposure and celebrity status on CSR. Based on the fact that both, media exposure and celebrity status, lead to greater attention from the public, it can be derived that these CEOs face higher external pressure to act in a socially responsible manner (Wei et al., 2018). Moreover, CEOs who are in the spotlight can use CSR as an instrument to enhance their own reputation and act in their own interests (Borghesi et al., 2014). In line with this argumentation, Borghesi et al. (2014), Godos-Díez et al. (2020), and Lee et al. (2020) found strong positive relationships between media exposure/ celebrity status and overall CSR. Lee et al. (2020) further confirmed these results by

showing significantly positive effects of celebrity status on CSR strengths and significantly negative effects on CSR concerns. Moreover, Borghesi et al. (2014) were able to find a significant and positive influence of media exposure on community, diversity, and employee dimensions, while Wei et al. (2018) found a similar influence of celebrity status on philanthropic giving. All in all, the positive impact of media exposure and celebrity status on CSR activities is widely acknowledged.

The last non-monetary incentive we identified in our review was founder family status in a family firm. Being a founder family member makes CEOs more likely to see themselves as stewards of the firm and therefore act in the best interest of the company with a long-term focus (e.g. gaining better relationships with stakeholders by improving CSR performance). Their inextricable attachment to the firm leads them to acquire more socioemotional wealth and seek to minimize any threats against the family owners (Berrone et al., 2010; Lamb and Butler, 2018). However, it is also possible that family CEOs make decisions in favour of their own personal or family gains and to the disadvantage of other shareholders because they do not need to worry about losing their authority (Miller et al., 2011). The two studies focusing on the influence of CEO family members on CSR found proof for both arguments. While Lamb and Butler (2018) found strong positive associations between family CEO and CSR strength for their U.S. sample, Kim and Lee (2018) found, for a South Korean sample, that family CEO was significantly and negatively related to overall CSR as well as corporate governance and environmental CSR. All in all, the mixed results make it impossible to draw a consistent conclusion about the influence of founder family status on CSR.

Table B-12: Overview of research findings on non-monetary incentives

Independent variables	**Dependent variables**	**Theoretical foundation**	**Findings**
Tenure	Overall CSR	Signalling (1); stakeholder theory (3); agency/ stakeholder theory (2); upper echelon theory (3)	Khan et al., 2020 (-); Choi et al., 2020 (-); Li et al., 2016 (o); Godos-Díez et al., 2020 (-); Chen et al., 2019b (-); Huang, 2013 (+); Lee et al., 2018b (-); Thomas & Simerly, 1994 (+)
	Environmental CSR	Upper echelon theory/ institutional theory; not specified	Cho et al., 2019 (+); Ortiz-de-Mandojana et al., 2019 (o); Arena et al., 2018 (+)
	CSR strength	Upper echelon theory/ human capital theory/ fixed paradigm theory	Oh et al., 2018 (o)
	CSR concern		Oh et al., 2018 (-)
	Social CSR (philanthropic giving)	Upper echelon theory	Marquis & Lee, 2013 (-); Wei et al., 2018 (o)

Independent variables	Dependent variables	Theoretical foundation	Findings
Age	Overall CSR	Stakeholder theory (2); upper echelon theory (2); agency/ legacy motivation	Huang, 2013 (o); Lee et al., 2018b (o); Kang et al., 2016 (o); Borghesi et al., 2014 (-); Chen et al., 2019b (o)
	CSR dimensions (community/ diversity/ employee/ environment/ humanitarian/ product)	Not specified	Borghesi et al., 2014 (o/ -/ o/ o/ -/ o)
Career horizon	Overall CSR	Economic perspective (agency theory)/ cognition-based perspective (legacy conservation motivation); not specified	Kang et al., 2016 (+); Fabrizi et al., 2014 (+)
	CSR strength	Upper echelon theory/ agency theory	Oh et al., 2016 (o)
	CSR concern	Upper echelon theory/ agency theory	Oh et al., 2016 (o); Lee et al., 2018a (invert U-shape)
	Environmental CSR (environmentally responsible technologies; overall environmental performance)	Not specified	Ortiz-de-Mandojana et al., 2019 (-); Fabrizi et al., 2014 (+)
	Social CSR (employee/community)	Not specified	Fabrizi et al., 2014 (+/o)
Power	Overall CSR	Not specified (1); agency theory (3)/ stakeholder theory (4)	Jiraporn & Chintrakarn, 2013b (non-monotonic); Fabrizi et al., 2014 (+); Sheikh, 2019 (-); Harper & Sun, 2019 (-); Li et al., 2016 (-); Ji et al., 2019 (-)
	CSR strength	Agency theory/ stakeholder theory	Sheikh, 2019 (-)
	CSR concern	Agency theory/ stakeholder theory	Sheikh, 2019 (o)
	Environmental CSR	Not specified (1); agency theory/ stakeholder theory (3)	Fabrizi et al., 2014 (+); Sheikh, 2019 (-); Harper & Sun, 2019 (-); Ji et al., 2019 (-)
	Social CSR (employee/community)	not specified (1); agency theory/ stakeholder theory (3)	Fabrizi et al., 2014 (+/o); Sheikh, 2019 (-/-); Harper & Sun, 2019 (-/-); Ji et al., 2019 (-/-)
	Other CSR dimensions (diversity/ product/ corporate governance/ human rights)	Agency theory/ stakeholder theory (2)	Sheikh, 2019 (-/o/n.a./n.a.); Harper & Sun, 2019 (-/o/-/o)
Succession	Overall CSR	Upper echelon theory/ agency theory	Liu, 2020 (+)
	CSR strength	Stakeholder salience theory/ stewardship theory	Chiu & Walls, 2019 (+)
	CSR concern	Stakeholder salience theory/ stewardship theory	Chiu & Walls, 2019 (o)

Independent variables	Dependent variables	Theoretical foundation	Findings
	CSR dimensions (environment/ community/ employee/ diversity/ product/ corporate governance/ human rights)	Stakeholder salience theory/ stewardship theory	Chiu & Walls, 2019 (+/o/+/o/+/o/+)
Media exposure	Overall CSR	Not specified; agency theory/ stakeholder theory	Borghesi et al., 2014 (+); Godos-Díez et al., 2020 (+)
	CSR dimensions (community/ diversity/ employee/ environment/ humanitarian/ product)	Not specified	Borghesi et al., 2014 (+/ +/ +/ o/ o/ o)
Celebrity status	Overall CSR	Identity theory/ stakeholder theory	Lee et al., 2020 (+)
	CSR strength	Identity theory/ stakeholder theory	Lee et al., 2020 (+)
	CSR concern	Identity theory/ stakeholder theory	Lee et al., 2020 (-)
	Social CSR (philanthropic giving)	Upper echelon theory	Wei et al., 2018 (+)
Founder family member	Overall CSR	Agency theory	Kim & Lee, 2018 (-)
	CSR strength	Stewardship theory; socioemotional wealth perspective	Lamb & Butler, 2018 (+)
	CSR concern	Stewardship theory; socioemotional wealth perspective	Lamb & Butler, 2018 (o)
	CSR dimensions (corporate governance/ integrity/ community/ customer/ environment/ employee/ economic)	Agency theory	Kim & Lee, 2018 (-/ o/ o/ o/ -/ o/ o)

Notes: (+) = positive influence of independent variable on dependent variable, (o) = no significant influence, (-) = negative influence.

B.4.3.7 Variables related to CEOs' monetary incentives

Whereas all the aforementioned categories dealt with determinants that are rather intrinsic, the last category contains the clearly extrinsic determinant of monetary incentives. The review contains several studies that examine the effect of CEOs' monetary incentives on CSR performance. Hereby using various explanatory variables such as long term compensation, equity incentives, short term compensation, pay-performance sensitivity, etc. As can be seen from Table B-13, the articles lead to highly mixed results. The authors mainly relied on the assumption that CEOs' compensation influences their temporal orientation in organizational decision making, in the way that the length of their compensation schemes also lengthen their decision horizons (Ortiz-de-Mandojana et al., 2019). Especially with regard to equity incentives, the literature suggests that they lead to greater identification with the company and

consequently to higher interests in long-term performance and avoidance of any harms (Thomsen and Pedersen, 2000). In line with this, the articles focusing on the effect of short-term compensation and bonus on CSR mainly found significantly negative relationships (Chan and Ma, 2017; Deckop et al., 2006; Fabrizi et al., 2014; Knox, 2020; Manner, 2010; Ortiz-de-Mandojana et al., 2019; Peng, 2020). McGuire et al. (2003) further confirmed these results by showing that salary, which is also characterized as short-term compensation, has a strong positive association with CSR concern. Only the study of Amore et al. (2019) found contrary results, namely a positive effect of a short-term compensation component on environmental CSR. With regard to long-term compensation and equity incentives, the review studies found rather mixed results. Even though most of the articles confirmed the hypothesis that CEOs will attempt to reduce potential risks to firm performance by avoiding socially irresponsible decisions when they receive higher long-term compensation (Amore et al., 2019; Chan and Ma, 2017; Cui et al., 2018; Deckop et al., 2006; Kang, 2017; Mahoney and Thorne, 2005; Ortiz-de-Mandojana et al., 2019; Peng, 2020), some found contrary results and showed strong negative relationships (Elgergeni et al., 2018; Fabrizi et al., 2014; Park et al., 2019), and still others found no significant relationships at all (Knox, 2020; McGuire et al., 2003). However, here again it should be mentioned that the results need to be viewed with caution regarding robustness due to partial overlaps in the samples and measures.

Boubaker et al. (2019), Knox (2020), and Wu and Lin (2019) focused on CEOs' inside debt and its influence on CSR, albeit using different measures. While Knox (2020) used the natural logarithm of CEO pension compensation, Boubaker et al. (2019) and Wu and Lin (2019) employed the inside debt-to-equity ratio. All studies found a significantly positive effect on CSR, including social CSR (Knox 2020), overall CSR (Wu and Lin 2019), and overall CSR and community, employee, environment, product, and diversity dimensions (Boubaker et al. 2019). Here again it should be noted that a potential overlap in the samples used by Boubaker et al. (2019) and Wu and Lin (2019) is likely. Jouber (2019) found a strong positive relationship between CEO pay slice and overall CSR performance, which stands in contrast to the results of the studies that used CEO pay slice to measure CEO power, and which found negative influences. Moreover, the results of Ali et al. (2020) indicate that CEO tournament incentives have a positive effect on overall CSR performance.

Finally, it is worth mentioning that McGuire et al. (2019) found strong negative relationships between pay performance sensitivity and CSR strength, as well as CSR concerns. This shows that high pay performance sensitivity may provide limited incentives to produce strong CSR, which mainly serves to extract future gains perceived as uncertain. However, it provides high

incentives to avoid negative CSR, which could affect the CEO's personal wealth through negative reputational and financial market implications.

Table B-13: Overview of research findings on monetary incentives

Independent variables	Dependent variables	Theoretical foundation	Findings
Total compensation	Social CSR (employee volunteer programme)	Not specified	Knox, 2020 (+)
Long-term compensation	Overall CSR	Resource-based theory; agency theory (3); risk management perspective; behavioural agency theory (2)	Peng, 2020 (+); Deckop et al., 2006 (+); Cui et al., 2018 (+); Mahoney and Thorne, 2005 (+); Lee et al., 2020 (o); Kang, 2017 (+); Park et al., 2019 (-)
	CSR strength	Stakeholder theory/ behavioural agency theory (3); agency theory	Manner, 2010 (o); McGuire et al., 2003 (o); Cui et al., 2018 (o); Mahoney & Thorne, 2005 (o); Lee et al., 2020 (o); Kang, 2017 (+)
	CSR strength (people/ product)	Agency theory	Mahoney & Thorne, 2005 (o/ o)
	CSR concern	Stakeholder theory/ behavioural agency theory (3); agency theory	Manner, 2010 (o); McGuire et al., 2003 (+); Cui et al., 2018 (-); Mahoney & Thorne, 2005 (-); Lee et al., 2020 (o); Kang, 2017 (o)
	CSR concern (people/ product)	Agency theory	Mahoney & Thorne, 2005 (o/ -)
	CSR dimensions (community/ employee/ product/ diversity/ human rights)	Agency theory (2); behavioural agency theory	Deckop et al., 2006 (o/ o/ o/ +/ +); Cui et al., 2018 (+/ +/ o/ o/ o); Mahoney & Thorne, 2005 (n.a./ n.a./ +/ n.a./ n.a.)
	Environmental CSR	Agency theory (2)/ contingent natural resource-based theory; behavioural agency theory	Chan & Ma, 2017 (+); Deckop et al., 2006 (+); Cui et al., 2018 (+)
	Social CSR	Not specified; agency theory	Knox, 2020 (o); Mahoney & Thorne, 2005 (o)
Equity incentives	Overall CSR	Not specified; behavioural agency theory; behavioural theory	Fabrizi et al., 2014 (-); Kang, 2017 (+); Elgergeni et al., 2018 (-)
	CSR strength	Behavioural agency theory (2); stakeholder theory	Kang, 2017 (o); McGuire et al., 2003 (o)
	CSR concern	Behavioural agency theory (2); stakeholder theory	Kang, 2017 (-); McGuire et al., 2003 (o)
	CSR dimensions (community/ employee/ environment)	Not specified	Fabrizi et al., 2014 (-/ -/ -)
	Environmental CSR	Not specified	Amore et al., 2019 (+); Ortiz-de-Mandojana et al., 2019 (+)
Short-term compensation	CSR strength	Upper echelon theory	Manner, 2010 (-)
	CSR concern	Upper echelon theory	Manner, 2010 (o)
	Social CSR (employee volunteer programme)	Not specified	Knox, 2020 (-)

Independent variables	Dependent variables	Theoretical foundation	Findings
Salary	CSR strength	Stakeholder theory/ behavioural agency theory	McGuire et al., 2003 (o)
	CSR concern	Stakeholder theory/ behavioural agency theory	McGuire et al., 2003 (+)
	Environmental CSR	Not specified; agency theory/ contingent natural resource-based theory	Amore et al., 2019 (+); Chan & Ma, 2017 (-)
Bonus	Overall CSR	Not specified; resource-based theory; agency theory	Fabrizi et al., 2014 (-); Peng, 2020 (-); Deckop et al., 2006 (-); Lee et al., 2020 (o)
	CSR strength	Stakeholder theory/ behavioural agency theory	McGuire et al., 2003 (o); Lee et al., 2020 (o)
	CSR concern	Stakeholder theory/ behavioural agency theory	McGuire et al., 2003 (o); Lee et al., 2020 (o)
	CSR dimensions (community/ employee/ product/ diversity/ human rights)	Not specified; agency theory	Fabrizi et al., 2014 (-/ -/ n.a./ n.a./ n.a.); Deckop et al., 2006 (o/ o/ o/ -/ -)
	Environmental CSR	Agency theory (2)/ contingent natural resource-based theory; not specified (2)	Chan & Ma, 2017 (-); Fabrizi et al., 2014 (-); Deckop et al., 2006 (-); Ortiz-de-Mandojana et al., 2019 (-)
Pension compensation	Social CSR (employee volunteer programme)	Not specified	Knox, 2020 (+)
Inside debt to equity ratio	Overall CSR	Not specified; risk mitigation theory	Wu & Lin, 2019 (+); Boubaker et al., 2019 (+)
	CSR dimensions (community/ employee/ environment/ product/ diversity/ human rights)	Risk mitigation theory	Boubaker et al., 2019 (+/ +/ +/ +/ +/ o)
CEO Pay Slice	Overall CSR	Agency theory	Jouber, 2019 (+)
Tournament incentive (pay gap)	Overall CSR	Tournament theory/ conventional wisdom hypothesis	Ali et al., 2020 (+)
Pay Performance Sensitivity	CSR strength	Behavioural agency theory	McGuire et al., 2019 (-)
	CSR concern	Behavioural agency theory	McGuire et al., 2019 (-)

Notes: (+) = positive influence of independent variable on dependent variable, (o) = no significant influence, (-) = negative influence.

B.5 Discussion, implications for future research and limitations

B.5.1 Discussion and implications for future research

CSR is a complex construct that is determined by various different factors. This review focused on examining the influence of CEO-related determinants on companies' CSR performance and brought out a wide range of explanatory variables and a variety of CSR measures used, thus confirming the high complexity of the construct. To allow for a comprehensive overview of the current research status, we synthesized the findings into a model, as displayed in Figure B-5.

This model is based on our integrative framework and shows all CEO-related determinants that have a significant impact on firms' CSR activities and performance, as well as the CSR dimensions explored.

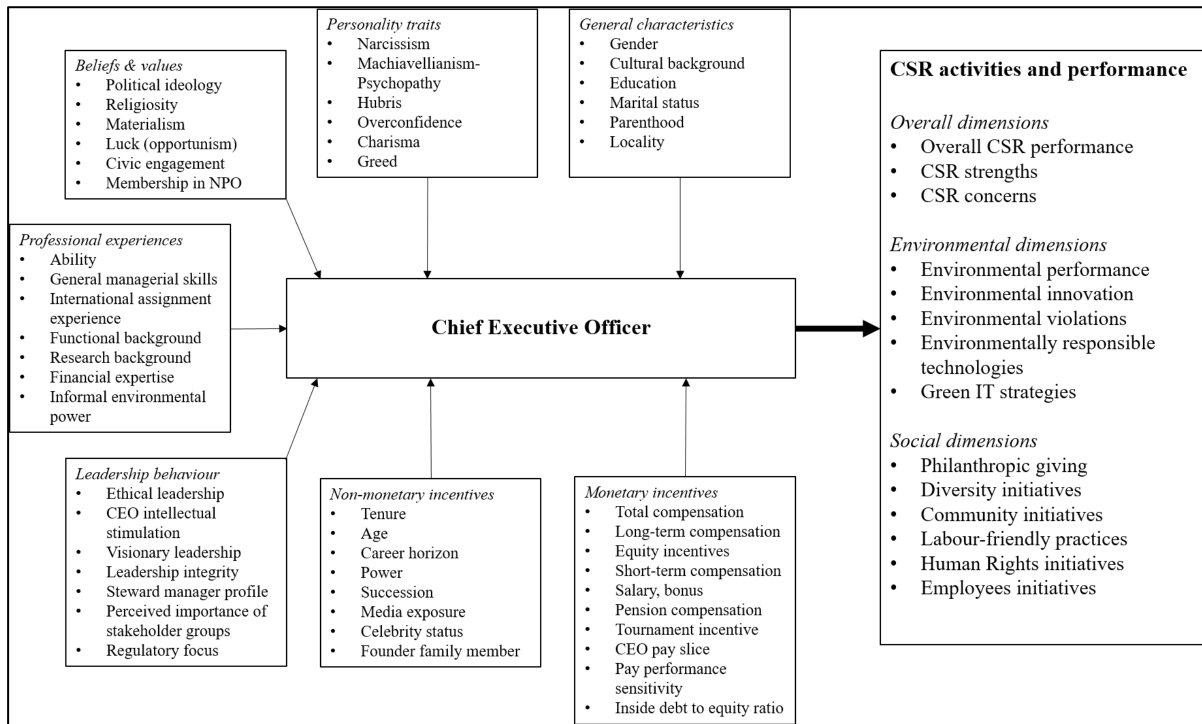

Figure B-5: Model of existing findings on CEO's influence on CSR

The main finding that can be drawn from our analysis is that the results show strong support for the upper echelon theory, which states that psychological traits, experiences, and values of the top management can explain major organizational decisions, actions, and outcomes (Hambrick and Mason, 1984). Several studies focused on the examination of variables comprising CEOs' personality traits, beliefs and values, as well as experiences and consistently showed that they have a significant influence on companies' CSR activities and performances. All in all, the high impact of CEOs' intrinsic motivations on firms' actual CSR engagement highlights the fragility of CSR performance as a whole and shows that more regulation would be useful in this context. Even though an increasing number of countries and initiatives around the world are gradually enacting regulations with regard to CSR (e.g. OECD Guidelines for Multinational Enterprises or EU non-financial reporting directive (2014/95/EU)), most of these regulations are either voluntarily applicable for companies or kept relatively broad due to the complexity of the topic and company-specific differences. As can be seen from our review findings, this has enabled CSR to become, or rather remain, highly person-dependent.

Therefore, to foster sustainable CSR performances, more concrete regulations are vital in the long run.

Besides this general call for more regulations, our findings also reveal potential courses of action for companies to improve CSR performance. Firstly, the review showed that corporate CSR increases with higher levels of CEO education. Hence, an introduction of regular training courses on CSR for CEOs as well as the whole management team could lead to higher CSR performance. By showing possibilities of how to engage and implement CSR activities, executives are not only educated in this area but also a general awareness of the topic is raised which may lead to more motivation and empowerment in this vein. Moreover, the results on monetary incentives suggest that it could be fruitful to install bonus plans that rely on CSR performance. This seems particularly beneficial for CEOs who do not have any intrinsic motivation for CSR.

Beyond these regulatory and practical implications, our review showed that there are still gaps and underexposed themes, and that previous research suffers from several weaknesses that should be addressed by future research:

Our analysis revealed that almost two thirds of all articles solely examined U.S. companies. This is most probably due to the high availability of data through relevant databases, nevertheless it leads to a limited generalizability of the results since they all focus on the same sample. In particular, sampling overlaps were found for studies examining the influence of gender, political ideology, ability, power, long-term compensation, and inside debt, which illustrate the important need for studies that focus on different countries. In relation to the fact, that there are highly divergent CSR efforts across different regions, it is recommendable to find out whether the observed effects are generally valid. Moreover, most of the studies investigated one particular country. Therefore, it seems necessary to conduct cross country studies to compare directly whether the CEO determinants are independent from cultural influences. Such designs could particularly contribute to the convergence versus divergence debate.

The measurement of CSR is notoriously difficult, mainly due to its qualitative nature on the one hand and its multidimensionality on the other hand. In line with this, the covered studies used a wide variety of data sources for CSR information, including scores from rating agencies (MSCI ESG KLD, Trucost, Thomson Reuters Asset4, etc.), surveys, information from company reports, and other publicly available data. Even though the articles used several different data sources, the vast majority of the studies employed CSR scores provided by rating agencies, especially the MSCI ESG KLD database. Given the fact that CSR ratings are, to a significant extent, outcomes of a subjective rating process (Bouten et al., 2017), future research should

tackle this weakness by using a wider range of data sources in order to enhance the robustness of the results. With regard to the measurement issue, most articles used overall aggregated CSR scores, which are problematic for two reasons. First, the aggregation of strengths and concerns results in misleading averages because strengths can offset weaknesses. Second, the aggregation of several CSR dimensions may lead to an equal weighting of their importance. However, the various CSR dimensions are of different weight for different industries (Capelle-Blancard and Petit, 2017). For these reasons, it is important that future research reduces the presented shortcomings by using separate CSR dimension scores.

Regarding the examined CEO-related determinants, the review identified a wide range of findings. Based on the identified seven categories of CEO drivers, we identified topics in need of future attention, including both a resumption of earlier research questions as well as a consideration of new research questions not yet addressed.

Starting with the category of general CEO characteristics, the influences of gender as well as education on CSR performance have been the most examined variables. The results show that a positive influence of female CEOs on CSR is widely acknowledged, and there is evidence that CSR engagement increases with higher CEO educational levels. In this context, it would be interesting to explore how specific trainings or seminars for top management could be designed to lead to higher perceptions of CSR topics and, in turn, to better CSR performances. With regard to the other explored variables of cultural background, nationality, locality, marital status, and parenthood, significant relationships were demonstrated but more studies are needed to further the robustness of the results.

The second category comprised variables related to CEO personality traits. Research on hubris, overconfidence, charisma, greed, and Machiavellianism-psychopathy show significant influences. However, in view of the low number of articles, more studies are needed that examine the relationships and confirm the results. Personality traits are generally hard to measure. Indeed, applied measures are never absolute measures, but rather approximations. Hence, we recommend different measures from the already used one to ensure that the results are robust and not ‘random’ due to measurement uncertainties. Thus far, narcissism is the trait that has received the most attention in research. The articles mainly acknowledge a positive influence of narcissism on CSR performance and especially on external actions. Therefore, it would be interesting to go further and ask the following question: Since narcissistic CEOs engage in CSR performance to satisfy their own need for attention rather than doing good, does the positive influence of narcissism on external CSR performance also lead to more greenwashing activities?

Category 3 comprised studies focussing on CEOs' beliefs and values. Most prominent in this context were the variables of political ideology (liberalism) and religiosity. The studies widely showed positive relationships between both constructs and CSR performance. However, the results for political ideology need to be seen carefully because the studies covered almost identical samples. Besides further studies that examine the effects on other samples, interesting questions for future research include the following: Since the current studies that explored the influence of religiosity on CSR performance mainly focused on social CSR activities, is the positive influence also verifiable for other CSR dimensions? Which incentives can be installed to enhance the CSR engagement of non-liberal CEOs? To further the robustness of the found results for materialism, opportunism, civic engagement, and membership in non-profit organizations, we recommend more studies focusing on these variables.

Studies that deal with the examination of variables related to CEOs' professional experiences were presented in category 4. Investigated constructs are ability, general managerial skills, international assignment experience, functional and research backgrounds, financial expertise, and informal environmental expert power. For all of these variables, significant relationships to CSR performance have been shown. Ability, international assignment experience, and functional background were the most examined variables, with at least two articles each. For all three variables, positive influences on overall CSR performance and environmental CSR activities were acknowledged. However, research is still very scarce in this context, which also applies to the other investigated variables. Therefore, more research on the influence of these variables on CSR is needed before further questions can be tackled.

The fifth category covered articles that investigated the impact of CEOs' leadership behaviour on CSR performance. Even though the category comprises several different variables that were examined, like ethical, charismatic, or visionary leadership, to date the particular variables are only examined by one study each. Based on this relatively low number of articles, it is important that future research validates the observed influences and findings.

Research about the influence of non-monetary incentives on CSR is presented in category six. Overall, this category contains many articles, especially with regard to tenure, age, career horizon, and power. The results on tenure and age are rather mixed or respectively indifferent, so that no general statements can be made. However, the review shows that a positive influence of career horizon on CSR and a negative impact of power on CSR performance are acknowledged. Potential future research questions in this area could be the following: Which incentive schemes can be introduced to strengthen the CSR commitment of CEOs with short career horizons? Is there a difference in the CSR engagement of powerful CEOs in the extent

of their dependence on the strength of the supervisory board or other control mechanisms? Also worth mentioning is that CEOs who are exposed to high media attention or have celebrity status engage more prominently in CSR activities, hereby showing that external attention increases the pressure to operate sustainably. However, research is still scarce and needs to be extended. With regard to succession and CEOs' founder family status in family firms, more research is also needed to check the robustness of the presented results.

The last category includes articles about the influence of CEOs' monetary incentives on CSR performance. The results indicate that short-term compensation has a rather negative impact on CSR, while the findings of long-term compensation on CSR are rather mixed. Therefore, we suggest a revisitation of previous research questions for the impact of long-term compensation as well as CEOs' pay performance sensitivity and inside debt-to-equity ratio on CSR activities, since these variables are only examined by a few studies each. With regard to new research questions, interesting areas of further study are as follows: Do special CSR-based bonuses sustainably increase CSR performance? How should these CSR-based bonuses be designed and how should they be linked to performance to achieve the greatest possible benefit in terms of CSR engagement?

Regardless of a particular variable category, the following questions may also be of interest for future research: How strong are the negative effects of certain CEO attributes on CSR? If, for example, a very powerful or overconfident CEO, for whom a negative influence on CSR can be expected, follows a CEO who strongly engaged in CSR, is the negative impact so strong that the CSR performance significantly decreases or does he or she at least stick to the achieved performance?

Moreover, if an appropriate number of articles on specific CEO drivers is available quantitative meta-analyses seems to be another starting point to broaden our understanding.

On basis of the argument that CEOs set the course for corporate CSR decision-making, the studies focused on the impact of CEOs' intrinsic or incentivised motives for CSR without including other top management team members as CSR officers. Although CEOs can sustainably influence the circle of decision-makers in firms, it does not mean that these executives share their views on CSR and decide in their favour. Thus, there is an urgent need for future research to overcome this limitation by including the whole top management team as CSR officers into the analysis. Even though it takes a lot of time and effort to analyse intrinsic motives for an entire management team, this is necessary to fully uncover the influence of individual-level drivers for CSR decisions.

Overall, the above-mentioned limits and gaps suggest that there are significant opportunities for future researchers to contribute to the field of CSR.

B.5.2 Contribution

This paper provides a systematic review of literature on the impact of CEOs on companies' CSR performance and contributes to the field in several ways. First, we offer detailed insights on consistencies and inconsistencies of the influence of various CEO-related determinants on CSR performance. In this vein, our review showed strong support for the upper echelon theory, thereby highlighting the great fragility of CSR performance and the important need for more regulation that promotes long-term CSR engagement and makes it less person-dependent. Moreover, we contribute by presenting an extensive analysis of the applied measures of CSR performance in the studies and thus reveal major shortcomings in current research that need to be tackled in the future. In addition, our descriptive analysis showed noteworthy aspects. In particular, we found that the high majority of the reviewed articles focused on U.S. samples. Coupled with the fact that some of these studies examined the same relationships and used the same databases for data collection, as well as the same time horizons, we were able to identify several overlaps in research that reduce the robustness of the found findings and simultaneously clarify the high need for research that focuses on different countries and regions. Furthermore, we provide practical implications for companies to improve CSR performance. Finally, we contribute by offering a set of potential research themes for future study.

B.5.3 Limitations

Like any research paper, this study is not without limitations. In the following, we will therefore give an overview of the limitations associated with our research process and methodology, and state how we addressed objectivity, validity, reliability, and generalizability. Our study aims to ensure objectivity by adhering to a systematic and structured process. Limitations in this context can be seen in the selection of databases as well as the exclusive focus on international articles written in English. Nevertheless, since we rely on two major databases in the field of management, we ensure coverage of a wide range of studies. Moreover, English represents the dominant language of the international research community and it is therefore improbable that we missed major findings due to the language focus (Narvaez-Berthelemot and Russell, 2001; Hahn and Kühnen, 2013). To ensure validity, we followed the guidelines of Fink (2010), which are frequently used by various researchers to conduct literature reviews (e.g. Seuring and Müller, 2008; Stechemesser and Guenther, 2012; Hahn and Kühnen, 2013) and were thus

deemed applicable and valid. Moreover, the focus on peer-reviewed journals as well as the inclusion of the Web of Science database that covers an extensive amount of high impact journals further enhanced validity, since the peer-review process is generally perceived as an effective measure to foster validity (Podsakoff et al., 2005). Our study strives for reliability by ensuring a rigorous screening and analysis of the collected articles. Although we address the generalizability of our findings by using two major databases and applying a broad search term, we do not assert that our findings can be generalized beyond the reviewed literature sample.

B.6 Appendix Section B

Table B-14: Keyword search and selection process

Search tools	Keyword search hits	Removed based on inclusion criteria/ duplicates	Articles in the final sample
EBSCO	744	-692	52
Web of Science	584	-545	39
Subtotals	1.328	-1.237	91
Analysis of references			2
Total			93

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C Staging or real commitment? CEO reputation management as a moderator of the influence of firm size on corporate social responsibility performance and controversies

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Contribution statement

Sophia Schwoy: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Visualization, Writing – Original Draft, Review & Editing

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C.1 Introduction

Along with the worsening environmental conditions and frequent social scandals of leading firms, companies are facing increasing pressure to integrate social responsibility into their corporate strategies (e.g. Carroll, 1991; Elkington, 1994; Galbreath, 2009). Hence, corporate social responsibility (CSR) has become a common business practice and continues to advance (Wickert et al., 2016). However, the high discretionary power that CSR offers leads to different levels of commitment by firms in reality (Dare, 2016; Saridakis et al., 2020). Research on companies' motivations to engage in CSR has therefore expanded rapidly. Initially, most scholars investigated institutional- and organisational-level predictors such as stakeholder pressure, country context, industry-specific characteristics and firm resources (Aguinis and Glavas, 2012; Hojnik and Ruzzier, 2016). Since these determinants could not explain all the different CSR behaviours, research began focusing on individual-level drivers, as strategic decision-making is highly shaped by the top management team (Hambrick and Mason, 1984). Studies in this vein found significant effects of various CEO characteristics (e.g. Amore et al., 2019; Birindelli et al., 2019; Zhou et al., 2021), board composition (e.g. Ludwig and Sassen, 2022; Post et al., 2011; Rao and Tilt, 2016) and management team values (Muller and Kolk, 2010). Overall, the majority of these studies explored the direct relationships between single CSR predictors and CSR performance (D'Amato and Falivena, 2020). Against the background that CSR depends largely on the specific combination of individual influencing factors as well as the organisational circumstances that determine whether it can be realised, our study tackles this issue and combines both effects by examining the interaction of a firm-level predictor of CSR with an individual-level driver of CSR. More precisely, we analyse the moderating effect of CEOs' reputational ambitions on the relationship between firm size and CSR, namely, CSR performance and CSR controversies.

Research has shown that firm size can be a major driver of CSR. On the one hand, larger firms, especially listed companies that must attract investors, face greater external pressure to act socially and environmentally responsibly than smaller firms (Lewis, 2003; Udayasankar, 2008). On the other hand, firm size also highly shapes the framework conditions for CSR activities, given that larger companies typically have relatively more financial resources (Brammer and Millington, 2006) and mature organisational processes, which facilitate the implementation of CSR initiatives (D'Amato and Falivena, 2020). Although it would be rational for large companies to invest in CSR, whether and the extent to which this actually occurs largely depends on the firm's decision-makers. CEOs, as the most influential actors in an organisation, can influence firms' strategic decisions and policies significantly (Chatterjee and Hambrick,

2007; Chen et al., 2009; Li et al., 2016). In particular, intangible decisions such as CSR involvement can be heavily influenced by the CEO's personal motivations, as they provide a high degree of discretion (Petrenko et al., 2016; Wernicke et al., 2022). Since most research on CEOs' individual-level drivers of CSR focuses on surface-level characteristics such as gender (Birindelli et al., 2019; Zou et al., 2018), age (Huang, 2013; Lee et al., 2018) and educational background (Manner, 2010; Sun et al., 2021), we shift our attention to the more specific but, up to date, rather scarce area of behavioural characteristics.

Multiple scholars have already argued that managers often overemphasise CSR to secure their personal reputations (Barnea and Rubin, 2010; Cespa and Cestone, 2007). Surprisingly, to the best of our knowledge, no study has thus far empirically investigated either the direct effect or the moderating effect of CEOs' reputation management on firm-level CSR. This is interesting, as CEOs, who tend to be concerned about their reputation, may use CSR initiatives to gain positive attention and feedback from media and stakeholders. Since CEOs are generally heavily praised for their firms' CSR behaviours (Petrenko et al., 2016), they can personally benefit from the spotlight and strengthen their external perception. However, we expect reputation-sensitive CEOs to be aware not only of the reputation-enhancing effect of good CSR performance (Malik, 2015), but also of the reputation-damaging potential of any form of CSR controversy or scandal. Therefore, we seek to contribute to the CSR literature by examining how CEOs' reputation management influences the relationship between firm size and CSR performance as well as CSR controversies.

Based on a cross-sectional dataset comprising CSR metrics of 128 Western European listed companies for 2019, which we combine with CEO information from LinkedIn, our results indicate that the positive relationship between firm size and CSR controversies is weakened by CEOs' reputation management, showing that large firms with CEOs who actively seek to build and maintain their personal reputation are involved in fewer CSR scandals. With regard to the positive relationship between firm size and CSR performance, we find no moderating effect of CEOs' reputation management.

With this study, we contribute to the literature in three ways. First, we enrich the CSR literature by extending the discussion on the relevance of firm size as a driver of CSR. Moreover, we shed light on the so far underexplored moderating influence of CEOs' reputation management on CSR performance and CSR controversies. Second, we contribute to the growing literature on upper echelon theory within a CSR context by showing that CEOs' reputational ambitions may mitigate the effect of a contextual factor on firms' CSR behaviour. Lastly, we add to the CEO reputation/impression management literature by introducing a new measure of CEO

reputation management based on their LinkedIn profiles and posting information. Given that social media has recently become more important – even in business – it is necessary to consider these developments and explore how CEOs use such platforms to present themselves and whether this fits with their firm's decision-making.

The remainder of the paper is organised as follows. Section 2 briefly reviews the relevant literature after which we develop our hypotheses. Section 3 describes our data, main variables and methodology. Section 4 presents our findings and Section 5 discusses the results, provides implications for theory and practice, and shows possible future research directions. The conclusions are presented in Section 6.

C.2 Theoretical background and hypotheses development

C.2.1 Corporate social responsibility

The concept of CSR, a strategic issue that plays a central role in the debate about the purpose of businesses, has become more relevant over time (Friedman, 1970; Kaysen, 1957; Latif and Sajjad, 2018; Margolis and Walsh, 2003). Although there is no generally accepted definition, most interpretations are close to the definition of the European Commission, which defines CSR as the 'responsibility of enterprises for their impact on society' (European Commission, 2011, p. 6). To meet their CSR, firms 'should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders' (European Commission, 2011, p. 6). From this understanding, CSR is an umbrella rubric for several organisational practices that aim to serve stakeholders beyond the company's owners, including customers, employees, communities and society at large (Chin et al., 2013). Although most countries have legally binding regulations that fall within the scope of CSR, scholars generally classify only those activities carried out by companies voluntarily, without legal compulsion, as CSR (Aguilera et al., 2007; Waddock, 2004).

To assess and compare the CSR performance of companies, rating agencies generally divide firms' activities into environmental, social and governance (ESG) and provide typical ESG indicators for each category (Eccles et al., 2020; Veenstra and Ellemers, 2020). Even though some scholars insist that CSR performance only comprises environmental and social performance, while ESG performance includes environmental, social and corporate governance performance (e.g. Gerard, 2019), we do not follow this approach. Based on the definition of CSR and in line with many scholars (e.g. Aguinis, 2011; Gleißner and Romeike, 2020; Maaloul

et al., 2023), we understand CSR and ESG as corresponding constructs and therefore use the terms interchangeably in this paper.

C.2.2 Effect of firm size on CSR

CSR has become a prerequisite for all companies, regardless of their industry, power and country of domicile (Bondy et al., 2012; Matten and Moon, 2008). Nevertheless, actual engagement varies widely among firms and what determines an exact CSR commitment remains unclear (Su, 2019). Theoretical considerations and prior CSR research suggest that firm size has a decisive influence on the level of engagement and therefore serves as a key driver of CSR activities and performance (Choi et al., 2020; McWilliams and Siegel, 2001; Udayasankar, 2008). Several firm attributes associated with size contribute to the discussion on firm size and CSR and may explain the phenomenon. One well-accepted view is that larger firms have greater visibility than smaller firms and are therefore more likely to act socially responsibly (Udayasankar, 2008). They face higher pressure from stakeholders, who are generally more interested in firms that directly affect them (Helmig et al., 2016), and usually use CSR as a criterion for judging those firms (Lewis, 2003). To attract more of those stakeholders and meet their expectations, more visible companies make greater efforts to report and disseminate CSR practices (Maignan and Ferrell, 2004). Another potential reason for the positive influence of firm size on CSR behaviour is that larger companies tend to have more financial resources than their smaller counterparts (Brammer and Millington, 2006). Therefore, they are better able to invest in discretionary initiatives such as CSR to effectively manage stakeholder relations and hence achieve legitimacy and credibility (Johnson and Greening, 1999; Palazzo and Scherer, 2006). A third attribute associated with firm size refers to the organisational and administrative processes of a firm (D'Amato and Falivena, 2020; Donaldson, 2001). Larger firms usually have well-defined decision-making processes as well as clear goals, measures and procedures (Bhambri and Sonnenfeld, 1988; Chen and Hambrick, 1995), which might support and improve the way CSR initiatives are implemented. Given these theoretical considerations and in line with prior studies (e.g. Colucci et al., 2020; Gregory, 2022; Udayasankar, 2008), we propose the following hypothesis:

Hypothesis 1a (H1a): Firm size is positively related to CSR performance.

Although there are several potential reasons for the positive influence of firm size on CSR performance, this does not necessarily mean that larger firms are involved in fewer CSR scandals. On the contrary, there are possible explanations for a positive relationship based on

theoretical deliberations. First, larger firms are of higher public interest than smaller companies. Due to their size, they have a greater impact on the environment and social aspects and generally affect more people's lives (Ullah et al., 2021). Society therefore expects them to fulfil their responsibilities and behave in a compliant and socially acceptable manner. The high media attention associated with the greater general interest leads to a stronger observation and monitoring of those firms (Dyck et al., 2008; Fiss and Zajac, 2006). Thus, corporate actions become more visible and irresponsible behaviour is more likely to be uncovered (Joe et al., 2009; Li et al., 2017). Moreover, if any CSR violations or misconduct occur, they are treated more prominently, as exemplary behaviour is expected from large companies. Hence, although larger firms may not actually be involved in more CSR controversies than their smaller counterparts, their risk of detection is higher, making a positive relationship between firm size and (uncovered) CSR controversies more likely. Second, according to the law of diminishing control, as the size of a company increases, control over its activities weakens (Downs, 1966). In particular, this applies to centrally organised tasks that need to trickle down the organisation to decentralised functional departments, divisions and subsidiaries (Nell et al., 2017). Since the CSR department is usually situated in the headquarters, while CSR policies must be carried out in every unit, information communication, coordination, interpretation and integration problems multiply with the size of the company (Glynn, 1996) and the likelihood of violations and improper implementation then rises. However, not only can compliance with CSR guidelines within the firm boundaries become an issue. Larger companies are more pressured to extend their CSR activities to their supply chain partners (Scherer et al., 2013; Vosooghidizaji et al., 2022). Given that large firms generally have several thousand suppliers worldwide, which frequently change due to price pressures and other challenges, controlling the implementation of the CSR standards to which the company has publicly committed rapidly becomes costly and complex (Wickert et al., 2016). This raises the risk of CSR controversies occurring due to vulnerabilities in the controls, either because of overly complex structures or because of negligence to save costs (Mombeuil et al., 2019). Based on these considerations, the following hypothesis is proposed:

Hypothesis 1b (H1b): Firm size is positively related to CSR controversies.

C.2.3 Moderating role of CEOs' reputation management

The CEO is one of the most powerful people in any company. As the head of the top management team, they not only play a key role in the strategic direction and control of the company (Carmeli et al., 2011; Castanias and Helfat, 1991; Hambrick and Mason, 1984), but

also represent the face of the firm by being the spokesperson at shareholder meetings, public events and in the press (Love et al., 2017). This high visibility leads people to perceive CEOs as the ultimate human force behind company successes and failures (Nohria and Khurana, 2010; Yukl, 2013). Research even shows that firm outcomes are overattributed to leaders, calling it the romance of leadership (Meindl and Ehrlich, 1987; Meindl et al., 1985). This overattribution means that the way CEOs are seen also decisively shapes the way their companies are seen and vice versa (Love et al., 2017). Stakeholders' image of the CEO is therefore irrevocably linked to the organisation, making the CEO's personal reputation a crucial factor that can have an immediate and long-lasting impact on the company (Fetscherin, 2015; Ranft et al., 2006).

In general, the CEO's personal reputation can be defined as a perceptual identity that reflects 'the complex combination of salient personal characteristics and accomplishments, demonstrated behaviour, and intended images presented over some period of time as observed directly and/or as reported from secondary sources' (Ferris et al., 2003, p. 213). As shown by this definition, a personal reputation may develop for a variety of reasons. Especially in the organisational context, CEOs can gain their reputation by behaving in various ways (Ferris et al., 2014; Zinko et al., 2016) such as showing their ability to perform tasks and consistently achieving stable results, which can raise stakeholders' confidence in the future behaviour of the leader (Ferris et al., 2003). At the same time, CEOs may also achieve reputational benefits by reflecting an 'other orientation', which includes providing assistance and support to others (Flynn, 2003; Flynn et al., 2006), motivating followers and getting them to identify with a vision using persuasion (charismatic leadership) (Banks et al., 2017; Jeanes, 2019) as well as demonstrating prosocial behaviours beyond the boundaries of the business (Ferris et al., 2014) such as donating to public charities and engaging in environmental aid. Overall, developing a good reputation is personally valuable for CEOs, as they are then seen as more legitimate, competent (Bendisch et al., 2013; Gioia and Sims, 1983) and trustworthy (Ostrom, 2003) and usually enjoy the benefits of being perceived as possessing a higher status (Hochwarter et al., 2007).

Although a CEO's reputation can grow over time based on their actions and behaviours, it is a fragile construct that can be destroyed easily. As Benjamin Franklin said, 'it takes many good deeds to build a good reputation, and only one bad one to lose it'. Consequently, maintaining and building their reputation through active reputation management is a key task for CEOs and their companies. Reputation management, also referred to as impression management, is the effort of influencing others' perceptions of one's image (Rosenfeld et al., 1995) through the deliberate placement and publication of good deeds and conducts. A crucial tool to present those

favourable behaviours to a large audience nowadays is social media (e.g. Hollenbaugh, 2021). In 2020, over 3.6 billion people worldwide used social media (Statista, 2021). In particular, all types of leaders embrace this opportunity, as it offers them a platform to interact easily with stakeholders (Lee and Oh, 2012; Yue et al., 2020; Yuen et al., 2023), some of whom would otherwise be hard to reach. Managing a social media account offers two major advantages for CEOs to build their reputation. First, they can share information on their activities and successes to the world that would otherwise only be known within the firm. Second, they become more approachable by sharing private information and personal opinions (Men and Tsai, 2016; Pamuksuz and Mourad, 2016). In addition to these assertive impression management tactics that aim to establish and shape a desirable image (Ellis et al., 2002; Mohamed et al., 1999; Tedeschi and Norman, 1985), social media opens up the possibility of using defensive tactics (Marx et al., 2018) such as protecting one's reputation from harmful influences and repairing damage to one's image (Gardner and Martinko, 1988; Schlenker, 1980; Snyder et al., 1983) through, for example, the timely posting of excuses, justifications and apologies.

We argue that CEOs' reputation management may influence the above-mentioned relationships between firm size and both CSR performance as well as CSR controversies. Larger firms have several incentives to invest in CSR activities and are equipped with the necessary resources to do so. However, the potential to perform well depends largely on individual decision-makers. Given that CSR is a voluntary concept that refers to actions that appear to advance some social good beyond the interest of the firm and its shareholders and that which is required by law (McWilliams and Siegel, 2001, p. 117), its voluntary nature leaves considerable discretion for the top management team to engage in and design CSR practices. Therefore, individual-level drivers may play a crucial role in the firm's CSR commitment. Building on the logic of upper echelon theory, which states that strategic decisions at the firm level are highly influenced by the psychological characteristics, personal values and experiences of top executives, CEOs – as the key decision-makers – have a significant impact on such discretionary decisions as CSR choices (Chatterjee and Hambrick, 2007; Hambrick and Mason, 1984). In fact, previous research has shown that several CEO characteristics (Birindelli et al., 2019; Zou et al., 2018) and psychological traits (Chen et al., 2019; Petrenko et al., 2016; Tang et al., 2015) significantly influence companies' CSR activities. However, these determinants are not necessarily mutually exclusive, and the combination of specific factors that precisely motivates CEOs to engage in CSR is complex and hard to unravel (Borghesi et al., 2014). Therefore, we examine the moderating influence of a behavioural, more superordinate driving force underexplored so far in the CSR context, namely, reputation management. Based on the upper echelon perspective,

we argue that CEOs who care for their personal reputation are more sensitive to the needs and advantages that CSR represents for large companies and thus exert a strengthening effect on the positive relationship between firm size and CSR performance.

CEOs actively managing their reputation via social media may perceive CSR as a good reputation-enhancing instrument and be motivated to actually invest in such initiatives for at least four reasons. First, stakeholders nowadays expect companies, especially large visible ones, to invest in CSR. By demonstrating high engagement in such activities, CEOs not only meet the needs of stakeholders, but are also perceived as good global citizens fulfilling their responsibilities towards the environment and society (Barnea and Rubin, 2010). Second, good CSR performance offers the chance of winning awards because CSR activities advance environmental and social goods (Petrenko et al., 2016). Various awards that rank and recognise CEOs and firms for superior CSR engagement have emerged over the last decade (Brammer et al., 2009; Cheng et al., 2017). Such awards are often prestigious and offer external recognition for environmental and/or social excellence, which can directly enhance the reputation and status of the award winner (Norman et al., 2009). Third, CSR represents one dimension of corporate reputation (Esen, 2013; Fombrun et al., 2000). An ambitious and successful CSR strategy consequently increases firms' overall reputation, and, since CEOs are perceived as the face of the firm, the commitment for good causes will be traced back to them and simultaneously increase their personal reputation. Finally, as CSR is highly regarded in society, the reputational gain from appropriate engagement may serve as a halo effect to avoid negative attention from other areas (Barnea and Rubin, 2010; Borghesi et al., 2014). In this case, CSR represents a tool to compensate for potential reputation losses. In light of these considerations, we propose the following hypothesis:

Hypothesis 2a (H2a): The positive relationship between firm size and CSR performance is strengthened by the extent to which the CEO engages in reputation management.

With regard to CSR controversies, CEOs who actively manage their reputation will be motivated to refrain from any irresponsible behaviour that may draw criticism from the public, media and stakeholders. While larger firms are more likely to become embroiled in CSR controversies, CEOs occupied with building and maintaining their reputation will be focused on preventing any engagement in such activities, since scandals, lawsuits and other CSR concerns are usually accompanied by reputation damage. The main reason for such behaviour is that reputation-sensitive leaders have more to lose in terms of their own human capital

(Francis et al., 2008), particularly their credibility and perceived integrity. In the same way as good corporate deeds are traced back to CEOs, corporate misconduct is also attributed to them. Depending on the extent and intensity of the controversy, the reputational penalties to leaders can be massive (Lanis et al., 2019). Prior studies, for example, show that CEO turnover (Humphery-Jenner, 2012; Karpoff et al., 2014) and impaired career opportunities (Correia and Klausner, 2012; Desai et al., 2006) are common consequences of corporate wrongdoing. Accordingly, CEOs with high reputational aspirations will avoid any form of CSR irresponsibility that may draw negative attention and aim to reduce CSR controversies. Therefore, we hypothesise the following:

Hypothesis 2b (H2b): The positive relationship between firm size and CSR controversies is weakened by the extent to which the CEO engages in reputation management.

Figure C-1 presents the conceptual model of our study, in which CEO reputation management is included as a moderator of the relationships between firm size and CSR performance as well as CSR controversies.

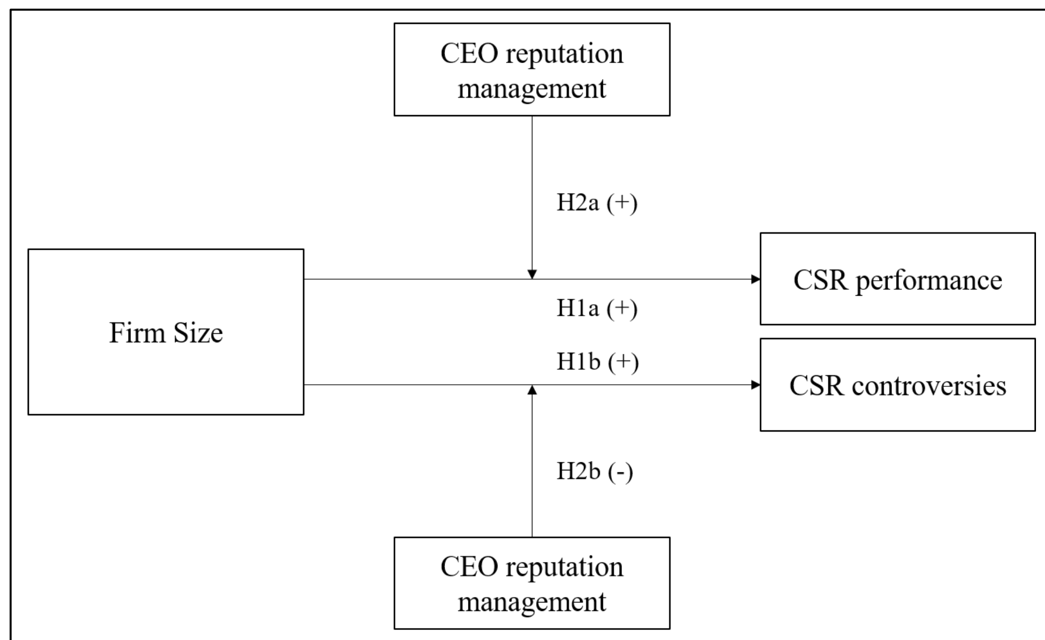

Figure C-1: Conceptual model

C.3 Methodology

C.3.1 Sample and data sources

To test our hypotheses, we construct a cross-sectional dataset of listed companies headquartered in seven Western European countries: Austria, Belgium, Germany, Ireland, Italy, Luxembourg and Portugal. We select these countries based on two conditions that had to be met. First, the countries have implemented the EU directive on the disclosure of non-financial and diversity information (Directive 2014/95/EU) to the same extent. Second, none of the selected countries had any non-financial disclosure requirements before the application of the EU directive. Applying these conditions led to the exclusion of France, Spain and the Netherlands as sample countries because they mandated comprehensive CSR reporting even before the directive (Gulenko, 2018; Lock and Seele, 2016). Applying these criteria is necessary to avoid potential biases in our results because both a stricter implementation of the directive as well as more comprehensive previous regulation might lead to more sophisticated reporting, which in turn influences the CSR scores that are mainly constructed based on the firms' CSR reports. For every company, we obtain the CSR data as well as the financial data from the Refinitiv Eikon database (formerly Thomson Reuters) for 2019. We exclude all companies that do not meet the scope of the EU directive as well as companies from highly regulated industries (banks and insurance companies) because of their specific accounting practices, regulatory environment and capital structure (e.g. Park et al., 2020; Velte, 2019; Wowak et al., 2016). A further exclusion is based on missing values in the database, which are mainly related to the CSR performance metrics. Finally, to be included in the sample, the firm's CEO had to have held their position for at least two years and have an active LinkedIn account. The tenure criterion is used to account for the fact that the CEO needs time to implement or at least influence their firm's CSR policies (Chin et al., 2013; Waldman et al., 2006). For those companies with two or more joint CEOs, we focus on the CEO responsible for the CSR strategy. Applying these criteria leaves us with a sample of 128 companies.

C.3.2 Variables

C.3.2.1 Dependent variables

CSR. To measure CSR engagement, we follow previous literature (e.g. Bătae et al., 2021; Habermann and Fischer, 2021; Kuzey et al., 2021) and use the data on firms' ESG profiles in the Refinitiv Eikon database as a proxy. Refinitiv captures and calculates multiple company-level CSR measures based on publicly reported information, of which the most material and

comparable in each industry is used to score firms. The measures are grouped into 10 categories (e.g. emissions, resource use, human rights, workforce, community, CSR strategy) that reflect the firm's CSR performance, engagement and effectiveness and can be aggregated into the three pillar scores environmental, social and corporate governance. The individual ESG scores and overall ESG score are calculated as the relative sum of the category weights, which are normalised to percentages ranging between 0 and 100. To account for materiality biases, the weights vary by industry for the environmental and social categories, but remain the same for the governance category (Refinitiv, 2021).

CSRC. We define the CSR controversies score (*CSRC*), which we also take from Refinitiv, as negative CSR performance. The controversies score is calculated based on 23 CSR controversy topics, including, among others, child labour, human rights and environmental and working conditions. Depending on the number and severity of these controversies, companies' scores range between 0 and 100 (Refinitiv, 2021). In our analyses, a CSR controversies score of 0 means that the company is not involved in any controversy, while a score of 100 represents engagement in multiple severe CSR controversies. As strengths can offset weaknesses and thereby lead to deceptive averages (Capelle-Blancard and Petit, 2017; Strike et al., 2006), we deliberately avoid using the ESG combined score that represents the ESG score overlaid with ESG controversies.

C.3.2.2 Independent variable

Size. Our independent variable is firm size. Following previous studies of CSR, we measure firm size as the natural logarithm of total assets (e.g. Cheung et al., 2010; Choi and Pae, 2011; Isidro and Sobral, 2015; Zhang et al., 2019).

C.3.2.3 Moderator variable

CEO's reputation management. We are interested in the moderating effect of the CEO's reputation management. While multiple studies operationalise the CEO's reputation using the number of mentions of the CEO in business-related articles (e.g. Francis et al., 2008; Jian and Lee, 2011; Milbourn, 2003; Weng and Chen, 2017), CEO's ability (e.g. Jian and Lee, 2011; Rajgopal et al., 2006; Weng and Chen, 2017) and official reputation rankings (Sanchez-Marin and Baixauli-Soler, 2014), studies that operationalise CEOs' reputation management are scarce, especially in the social media context. Although some studies use self-presentation on social media to measure personality traits such as narcissism (e.g. Aabo and Eriksen, 2018; Corten and Michiels, 2018; Lee et al., 2014), Big Five traits (e.g. Ryan and Xenos, 2011; van de Ven

et al., 2017) and self-esteem (Mehdizadeh, 2010) no published paper to date measures CEOs' reputation management, to the best of our knowledge.

As the CEOs in our sample used LinkedIn rather than any other social media platform, we create a new measure of CEOs' reputation management based on their LinkedIn profiles. LinkedIn is a social network for professionals that focuses on business relationships and interactions. It has more than 774 million members in over 200 countries (LinkedIn, 2021) and can be used to build awareness and gain referrals (Kietzmann et al., 2012; Mas-Bleda et al., 2014). A LinkedIn account consists of two main features. The first is the general profile overview where users can add information about themselves on various areas such as education, previous job positions, skills and interests. Second, LinkedIn members have the opportunity to like, post, share and comment on content (i.e. posts, documents, articles, photos, videos) in the 'Activities' section, which is displayed as a timeline. Because not every member uses the 'Activities' function, our reputation management measure relies on the profile overview.

In concrete terms, we develop a scoring model to calculate a reputation management score (*RMScore*) for every CEO in our sample (see Table C-1). As the criteria, we use those LinkedIn sections that help CEOs present themselves in a good light and thus have the potential to positively influence others' perceptions of them, as follows:

- 'Education' → In this section, CEOs can provide information about their educational background. In particular, higher education degrees, degrees from prestigious universities and multiple degrees in different disciplines raise confidence in CEOs' knowledge and abilities and consequently improve their reputation. For our scoring model, we code this item zero if the CEO refrains from disclosing information and one if such information is shared.
- 'Experience' → The previous job positions of the CEO can be listed in the 'Experience' section. By revealing their previous work experience, CEOs can demonstrate their professional qualifications. Due to the high variance in the amount of information added, we calculate the average number of disclosed positions and then assign zero points if no content is provided, 0.5 points if the number of positions is between 1 and the average and one point if the number of positions is above the average (this scoring procedure is used for the following items as well).
- 'Skills & Endorsements' → This section allows CEOs to add any professional skills which they believe to have. By adding several skills, CEOs can demonstrate their high ability to do their job and thereby foster a corresponding perception.

- ‘Connected Professionals’ → CEOs interested in building and maintaining their reputation will aim to stay in contact with their firm’s stakeholders, share their achievements with them, keep them updated and interact with them. Consequently, the number of connected professionals is higher.
- ‘Feedback’ → This section offers the chance to provide brief feedback about another LinkedIn member with whom the user has previously worked. Such feedback normally contains statements about the work motivation and professional competencies of the person being evaluated and appears in the profiles of both the rater and the rated. CEOs who voluntarily provide feedback for employees, co-workers and partners demonstrate an other-orientation since they take the time to individually write a recommendation that could help the assessed person be more attractive to future employers. Writing feedback can therefore be interpreted as an act that boosts the reputation of the CEO.
- ‘Interests’ → This section lists all the non-personal profiles in which the profile owner is interested and follows (e.g. profiles of companies, foundations, sports clubs, universities, NGOs). These declared interests represent more private information about the CEO that allows outsiders to assess their character. By opening up to interested parties and disclosing their interests, CEOs may appear more likeable, sophisticated and even engaged, especially if they follow NGOs and foundations that work to combat poverty, advocate for climate and environmental protection or are committed to regional community projects. Hence, CEOs can foster the impression of being trustworthy and thus improve their reputation.

After assigning points to each criterion, we sum them, calculate the percentage of the achieved points relative to the maximum number of points achievable and multiply this by 100 so that the score takes values between 0 and 100. The higher the score, the higher the CEO’s reputation management. All the criteria are equally weighted for the calculation.

Table C-1: Scoring model (all criteria are equally weighted)

Criterion (LinkedIn Section)	Points	Classification
Education	0	No information disclosed
	1	Educational background disclosed
Experience	0	No information disclosed
(average number of previous positions: 5)	0.5	1–5 job positions
	1	> 5 job positions
Skills & Endorsements	0	No information disclosed
(average number of skills & endorsements: 17)	0.5	1–17 skills
	1	> 17 skills
Connected Professionals	0	0–10 connected professionals

Criterion (LinkedIn Section)	Points	Classification
(maximum number that LinkedIn displays: 499)	0.5	11–499 connected professionals
	1	> 500 connected professionals
Feedback for others	0	No feedback disclosed
(average number of pieces of feedback given: 2)	0.5	1–2 pieces of feedback
	1	> 2 pieces of feedback
Interests	0	No information disclosed
(average number of interests: 26)	0.5	1–26 interests
	1	> 26 interests

To ensure that our developed reputation management score captures what it aims to measure, we perform content reliability tests. Specifically, we assess the score's internal reliability using Cronbach's alpha and composite reliability indices. Cronbach's alpha takes a value of 0.73 and composite reliability of 0.732, which both exceed the threshold (0.7) recommended by Hair et al. (2010) and indicate satisfactory construct reliability.

C.3.2.4 Control variables

To rule out alternative explanations that may account for the variance in *CSR* and *CSRC*, we control for several environmental, firm-level and CEO-level variables in our analyses. First, previous research (e.g. Garcia et al., 2017; Ullmann, 1985; Waddock and Graves, 1997) has found that industry type is significantly associated with *CSR*. The Eikon CSR scores already adjust for industry materiality. However, in addition to the materiality of CSR aspects also the general CSR norms differ by industry (Campbell, 2007). High-profile industries face greater stakeholder pressure, more intense competition and they are exposed to higher political risk (Roberts, 1992), which lead them to be more active in the CSR area. To account for this industry effect, we include a dummy variable (*IND*) coded one if the firm belongs to a high-profile industry and zero for low-profile industries. Consistent with earlier studies (e.g. Hackston and Milne, 1996; Patten, 1991; Pérez et al., 2020), we identify the following industries as high profile: basic materials, energy, utilities, industrials and automobiles. Moreover, we also include textiles, pharmaceuticals and biotechnology due to the various scandals that have recently arisen in these industries (e.g. child labour and water pollution in textile subsidiaries in Asia, drug scandals in India) and lead to rising visibility and pressures to act environmentally and socially responsible. By contrast, the following industries are classified as low profile: telecommunications & IT, real estate, consumer cyclicals (e.g. media, entertainment), consumer non-cyclicals (e.g. beverages, household products) and service providers in the healthcare and industrial sectors. We also control for firm performance measured by return on assets (*ROA*), as profitability is often linked to CSR performance (Alexopoulos et al., 2018; McGuire et al.,

2003; Waddock and Graves, 1997). In addition to the performance–CSR link, CSR activities and controversies may be affected by firms' financial risk, proxied by *leverage* (Aksoy et al., 2020; Birindelli et al., 2019; Cui et al., 2018b). Leverage is defined as the ratio of total debt to equity.

At the CEO level, we account for the structural sources of managerial influence by including CEO *tenure* as a control variable. CEO tenure represents an important source of power within the firm (Gupta et al., 2019; Huang et al., 2021; Porac et al., 1999) that may also influence CSR decisions. We measure tenure as the number of years the CEO has held their position (Marquis and Lee, 2013; Wei et al., 2018). Moreover, we control for CEO *gender*, as previous research has shown that women demonstrate greater sensitivity towards ethical issues (Bhuiyan et al., 2021; Simga-Mugan et al., 2005) and less selfishness than men (Croson and Gneezy, 2009). *Gender* is coded as a dummy variable which equals one for a female CEO and zero otherwise.

C.3.3 Model specifications

We explore the hypothesised relationships using the ordinary least square (OLS) regression method. In order to test H1a and H1b, the models shown in equation (1) and (2) estimate CSR performance and respectively CSR controversies based on firm size and also take into account the control variables that reflect characteristics of the company as well as the CEO related to the dependent variables:

$$CSR = \beta_0 + \beta_1 Size + \beta_2 RMScore + \beta_3 IND + \beta_4 ROA + \beta_5 Leverage + \beta_6 Tenure + \beta_7 Gender + \varepsilon \quad (1)$$

$$CSRC = \beta_0 + \beta_1 Size + \beta_2 RMScore + \beta_3 IND + \beta_4 ROA + \beta_5 Leverage + \beta_6 Tenure + \beta_7 Gender + \varepsilon \quad (2)$$

In H2a and H2b, we are interested in how CEO's reputation management moderates our baseline relationships between firm size and CSR performance as well as CSR controversies. The models presented in equation (3) and (4) therefore include the interaction term of size and CEO reputation management:

$$CSR = \beta_0 + \beta_1 Size + \beta_2 RMScore + \beta_3 Size * RMScore + \beta_4 IND + \beta_5 ROA + \beta_6 Leverage + \beta_7 Tenure + \beta_8 Gender + \varepsilon \quad (3)$$

$$CSRC = \beta_0 + \beta_1 Size + \beta_2 RMScore + \beta_3 Size * RMScore + \beta_4 IND + \beta_5 ROA + \beta_6 Leverage + \beta_7 Tenure + \beta_8 Gender + \varepsilon \quad (4)$$

To check our data for the presence of multicollinearity, we compute the variance inflation factors of the variables in our models and find that they are all below five. Therefore, multicollinearity is not a problem in this study. As the models for CSR controversies (see equations (2) and (4)) indicated a potential heteroscedasticity problem, we employ the approach of White (1980) and run our regressions using robust standard errors.

C.4 Results

C.4.1 Descriptive statistics and correlations

Table C-2 and Table C-3 present the descriptive statistics and correlations of the variables of our regression model and robustness checks. As a preliminary examination of Hypotheses 1a and 1b, we find that firm size has a positive and significant correlation with CSR performance ($p < 0.01$) as well as CSR controversies ($p < 0.01$). Moreover, the CEO's reputation management score is significantly negatively correlated with CEOs' tenure at the 5% level, indicating that CEOs with a shorter tenure put more effort into self-presentation on LinkedIn.

Table C-2: Descriptive statistics

		Mean	**SD**	**Min**	**Max**
1	CSR	55.429	18.496	12.021	91.499
2	CSRC	10.611	24.978	0	98
3	Size	21.899	1.557	19.015	26.197
4	RMScore	57.812	22.762	0.000	100.000
5	IND	0.469	0.501	0	1
6	ROA	4.345	7.593	-51.802	26.335
7	Leverage	102.082	124.888	0.000	891.373
8	Tenure	8.000	6.599	2	36
9	Gender	0.047	0.212	0	1
10	RMScore2[1]	54.241	22.037	0.000	100.000
11	Sales	9.338	0.642	8.093	10.939
12	Employees	8.872	8.872	8.872	8.872

[1] Variables 10 – 12 represent our robustness variables

Table C-3: Correlations

		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	CSR	1											
2	CSRC	0.261***	1										
3	Size	0.569***	0.510***	1									
4	RMScore	0.021	-0.049	-0.015	1								
5	IND	0.161*	0.025	0.196**	-0.111	1							
6	ROA	-0.035	-0.192**	-0.072	-0.060	-0.006	1						
7	Leverage	-0.038	0.043	0.250***	0.038	-0.048	-0.070	1					
8	Tenure	-0.140	-0.139	-0.225**	-0.176**	-0.093	0.066	0.032	1				
9	Gender	-0.032	-0.005	-0.082	0.019	-0.134	0.045	-0.047	-0.101	1			
10	RMScore2[2]	0.063	-0.020	0.028	0.972***	-0.095	-0.054	0.026	-0.172*	0.005	1		
11	Sales	0.589***	0.469***	0.910***	-0.049	0.182**	-0.063	0.192**	-0.196**	-0.061	0.011	1	
12	Employees	0.527***	0.407***	0.770***	-0.070	0.098	-0.123	0.222**	-0.125	-0.016	-0.022	0.882***	1

Notes: N = 128 (full sample); *$p < 0.1$ (two-tailed); **$p < 0.05$ (two-tailed); ***$p < 0.01$ (two-tailed)

[2] Variables 10 – 12 represent our robustness variables

C.4.2 Regression results

The results of the multivariate regression analyses are provided in Table C-4 (models 1–4). We run the regression models once with CSR performance as the dependent variable and once with CSR controversies. The first model always includes the independent and control variables, while the second model introduces the interaction terms and thus contains all the variables. Supporting Hypotheses 1a and 1b, we find that firm size relates significantly positively to CSR performance ($\beta = 7.306$, $p < 0.001$, model 1) and CSR controversies ($\beta = 8.650$, $p < 0.001$, model 3). Model 2 includes the interaction term between firm size and CEOs' reputation management to test Hypothesis 2a. The coefficient of the interaction term is negative but not significant ($\beta = -0.047$, $p > 0.1$). Consequently, we cannot confirm Hypothesis 2a. In model 4, we test Hypothesis 2b and regress the interaction term between firm size and CEOs' reputation management against CSR controversies. We find that the coefficient is negative and significant ($\beta = -0.113$, $p = 0.060$), indicating that the CEO's active reputation management weakens the positive relationship between firm size and CSR controversies. This can also be seen from the interaction plot[1] in Figure C-2, which shows that the positive relationship between firm size and CSR controversies is weaker when the CEO's reputation management is high (+ 1 SD) than when it is low (-1 SD). In Figure C-3 we provide the Johnson-Neyman plot of this interaction. It shows that the significant positive effect that size has on CSR controversies decreases when the CEO's reputation management score ranges from 0 to 87.45. Within this interval, the positive effect of size will be weakened as the reputation management score increases. 96.1 % of our data falls within this range. Due to the limited number of very high reputation management scores (above 87.45), which is 3.9 %, our data cannot confirm a significant moderating effect within this range (above 87.45 to 100). Taken together, our results thus support hypothesis 2b. With respect to the control variables, a significantly negative influence of the firm's leverage on CSR performance ($p< 0.05$) can be seen in models 1 and 2, showing that companies with higher debt-to-equity ratios invest less in CSR activities.

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[1] We calculated our regressions in R. For plotting the interaction effects we used the ggpredict function, which computes predicted values for all possible values from a model's predictors and returns confidence intervals based on the standard errors (Lüdecke, 2023).

Table C-4: Regression analysis

	Dependent variable: CSR		Dependent variable: CSRC	
	(model 1)	**(model 2)**	**(model 3)**	**(model 4)**
Size	7.306***	9.751***	8.650***	14.524***
	(0.923)	(1.951)	(4.267)	(3.766)
RMScore	0.036	1.055	-0.067	2.381*
	(0.071)	(0.758)	(0.077)	(1.244)
Size x RMScore		-0.047		-0.113*
		(0.035)		(0.059)
IND	1.459	1.758	-4.545	-3.825
	(2.961)	(2.924)	(4.329)	(4.312)
ROA	-0.006	-0.0004	-0.540	-0.525
	(0.145)	(0.152)	(0.443)	(0.446)
Leverage	-0.028**	-0.028**	-0.021	-0.019
	(0.011)	(0.011)	(0.018)	(0.018)
Tenure	0.049	0.041	-0.076	-0.095
	(0.238)	(0.238)	(0.242)	(0.252)
Gender	1.360	1.613	3.399	4.006
	(4.339)	(4.318)	(9.673)	(11.043)
Constant	-104.884***	-158.197***	-167.946***	-296.054***
	(22.250)	(43.498)	(42.874)	(79.681)
Observations	128	128	128	128
R2	0.362	0.369	0.305	0.329
Adjusted R2	0.325	0.327	0.265	0.283
F Statistic	9.716***	8.700***	7.539***	7.278***

Notes: *p < 0.1; **p < 0.05; ***p < 0.01

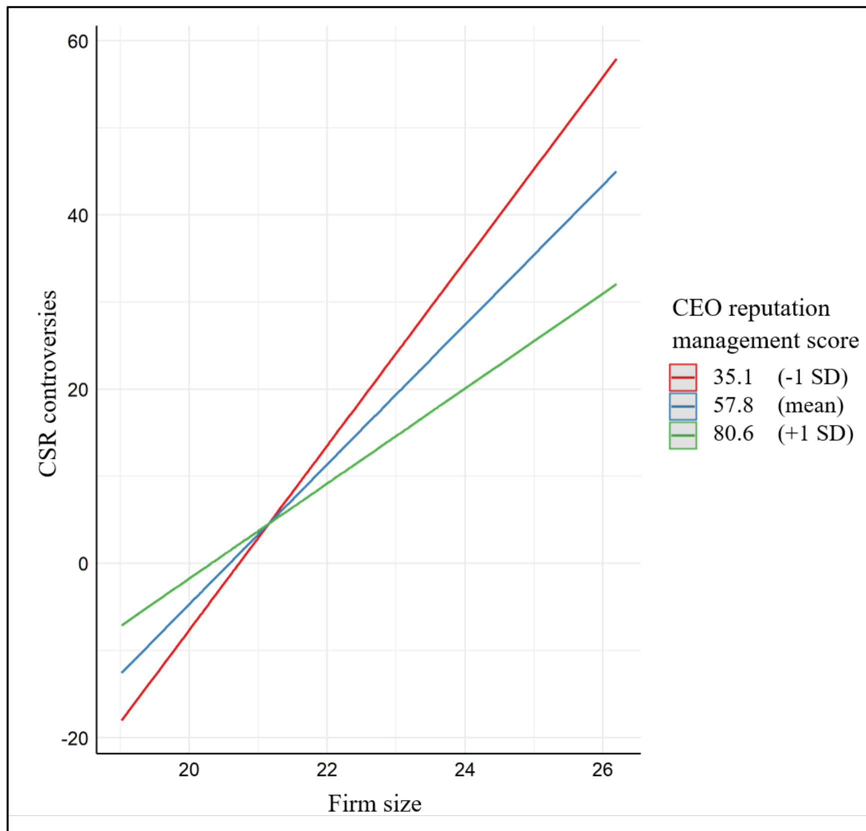

Figure C-2: The moderating effect of the CEO's reputation management on the relationship between firm size and CSR controversies

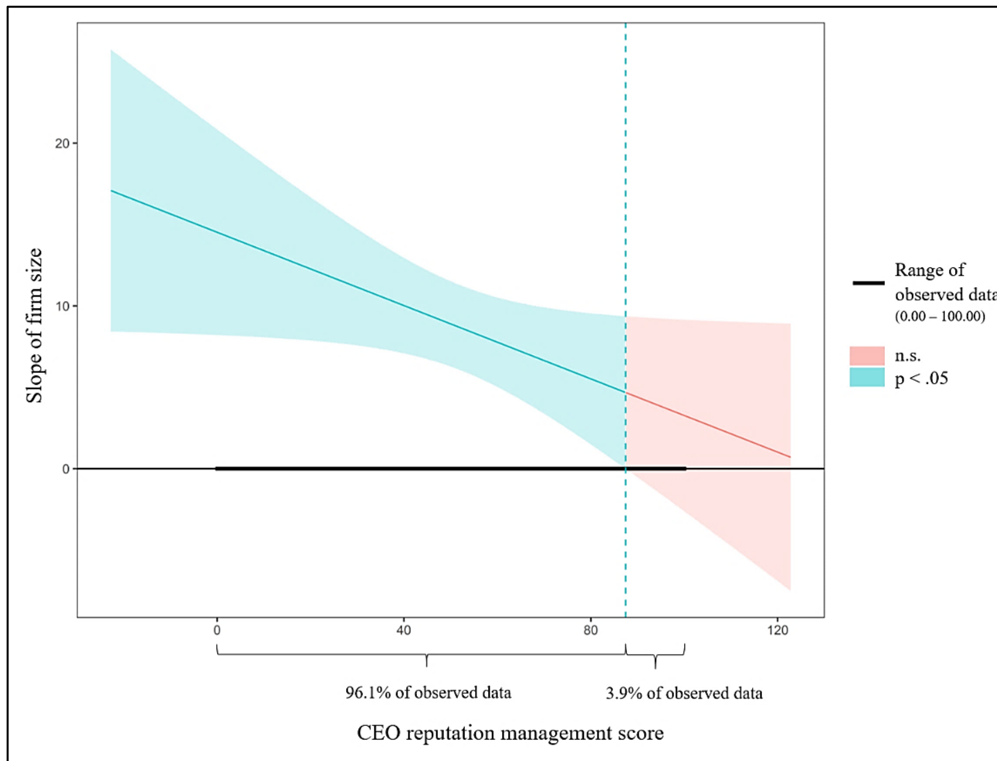

Figure C-3: Johnson-Neyman plot of the interaction effect between firm size and the CEO's reputation management on CSR controversies

C.4.3 Supplementary analysis

Given that our main measure of CEOs' reputation management is a general one, we also investigate whether the results remain the same if we examine the influence of CEOs' reputational efforts more specifically by focusing explicitly on CSR-related reputation management using social media. While the LinkedIn profile overview is a good tool for general reputation management, the possibilities to build up and promote a CSR-related reputation are limited. A better option in this vein is the posting of contents in the 'Activities' section. Social media, especially content-posting functions, offers users the opportunity to present themselves in the way they want to be perceived by others. Analysing the content of posts is therefore promising to deduce in which direction CEOs want to steer their reputation. Given that CEOs interested in building and managing a CSR-related reputation will regularly share CSR messages, we use the number of CSR-related posts by CEOs (*CSRPosts*) in 2019 to measure CEOs' CSR reputation management. The results are presented in Table C-5 (models 5–8). Given that our sample is reduced to 68 cases in this analysis because not all the CEOs in our initial sample use the posting function on LinkedIn, we also reduce our model size by excluding the control variable of *gender*.

The results show that size is a strong predictor of CSR performance ($\beta = 6.595$, $p < 0.001$, model 5) and CSR controversies ($\beta = 9.215$, $p < 0.001$, model 7), thus again supporting Hypotheses 1a and 1b. In line with our previous results, we do not find support that an actively managed CSR reputation by the CEO strengthens the positive relationship between firm size and CSR performance ($\beta = 0.018$, $p > 0.1$, model 6). With respect to CSR controversies, we find a negative and significant coefficient of the interaction term of firm size and CSR posts ($\beta = -0.216$, $p = 0.009$, model 8), thereby further supporting Hypothesis 2b. The interaction plot in Figure C-4 shows that the relationship between firm size and CSR controversies is much weaker for CEOs who regularly post CSR-related content (+1 SD) than for CEOs who post less (0 posts). In Figure C-5 we present the Johnson-Neyman plot of the interaction, which shows that the significant positive effect that size has on CSR controversies decreases when CEO's CSR-related postings range from 0 to 31. Within this interval, the positive effect of size will be weakened as the CSR-related posts increase. 89.71 % of our data falls within this range. Although the number of CEO's CSR-related posts is widely dispersed in our sample, ranging from 0 to 132, the number of CEOs with a very high number of CSR-related postings (above 31) is rather small with 10.29 %. Therefore, our data cannot confirm a significant moderating effect within this range (above 31 to 132). Nevertheless, the results show that Hypothesis 2b is supported. In terms of the control variables, we find a significant negative effect of ROA on

CSR controversies ($p < 0.01$, models 7 and 8), suggesting that firms with higher ROA are entangled in less CSR scandals. Moreover, industry also has a significantly negative impact on CSR controversies ($p < 0.05$), which indicates that companies from high-profile industries are involved in fewer controversies than firms from low-profile industries.

Table C-5: Supplementary analysis

	Dependent variable: CSR		**Dependent variable: CSRC**	
	(model 5)	**(model 6)**	**(model 7)**	**(model 8)**
Size	6.595*** (1.420)	6.401*** (1.488)	9.215*** (2.640)	11.530*** (2.934)
CSRPosts	0.027 (0.076)	-0.398 (1.788)	-0.124 (0.193)	4.948*** (1.851)
Size x CSRPosts		0.018 (0.074)		-0.216*** (0.080)
IND	1.839 (3.874)	2.009 (3.835)	-11.918** (5.516)	-13.948** (5.570)
ROA	-0.289 (0.212)	-0.294 (0.216)	-0.853*** (0.256)	-0.789*** (0.270)
Leverage	-0.045 (0.034)	-0.045 (0.034)	-0.032 (0.022)	-0.027 (0.021)
Tenure	-0.164 (0.613)	-0.140 (0.605)	0.124 (0.383)	-0.166 (0.409)
Constant	-81.898** (31.091)	-77.670** (33.206)	-178.349*** (55.810)	-228.820*** (61.783)
Observations	68	68	68	68
R2	0.372	0.373	0.388	0.439
Adjusted R2	0.311	0.300	0.328	0.373
F Statistic	6.034***	5.102***	6.445***	6.696***

Notes: *p < 0.1; **p < 0.05; ***p < 0.01

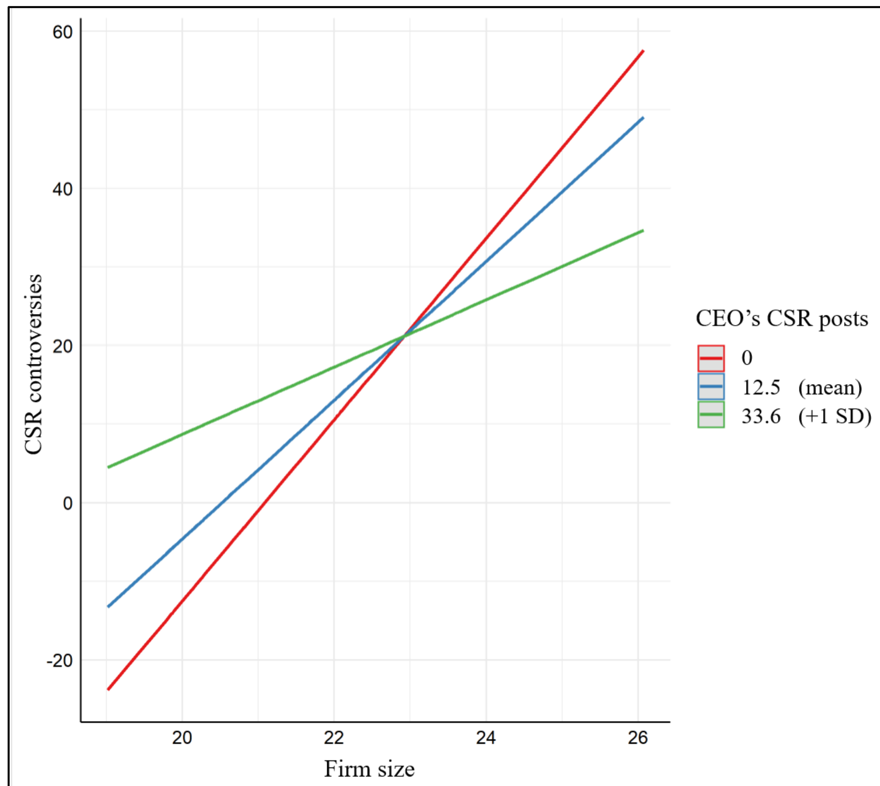

Figure C-4: The moderating effect of the CEO’s CSR-related reputation management on the relationship between firm size and CSR controversies

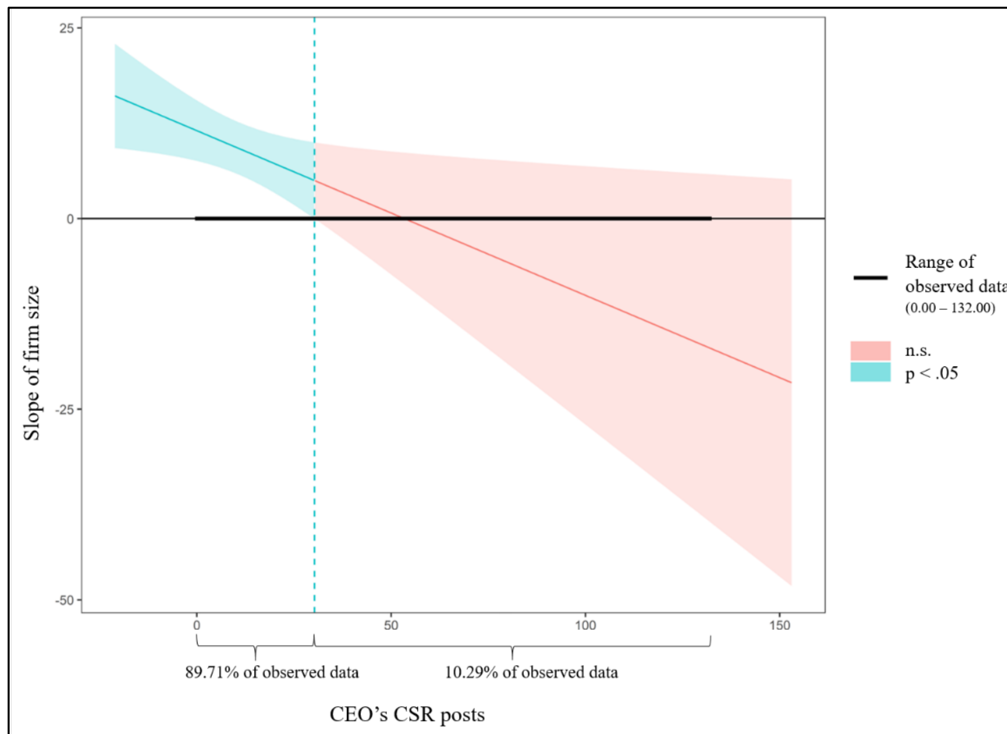

Figure C-5: Johnson-Neyman plot of the interaction effect between firm size and the CEO’s CSR-related reputation management on CSR controversies

C.4.4 Robustness checks

To ensure the robustness of our results, we performed several additional analyses. First, we reran the regressions using an alternative measure to capture the CEO's reputation management on LinkedIn. In our main analysis and supplementary analysis, we strictly separated the general self-presentation of the CEOs on their profile overview and the thematic content they share in their postings under the 'Activities' section. However, CEOs can also influence and steer their general reputation through the sheer amount of generated content within the 'Activities' section, regardless of the specific topic. Therefore, we constructed a second reputation management score (*RMScore2*) that comprises the six criteria from our original reputation score but additionally integrates the amount of shared content of the CEOs as a seventh criterion. Following the same scoring procedure as before, we determined the average number of generated content (posts, articles and comments) per CEO and then assigned zero points if no content was shared, 0.5 points if the amount of content was between 1 and the average (35) and one point if the amount was above the average. The regression results are provided in Table C-6 (models 9–12). Confirming our previous results, we find no significant strengthening effect on the positive relationship between firm size and CSR performance ($\beta = -0.044$, $p > 0.1$, model 10) but we do find a significant weakening effect on the positive relationship between firm size and CSR controversies ($\beta = -0.114$, $p = 0.06$, model 12).

Table C-6: Robustness check – Alternative measure for RMScore

	Dependent variable: CSR		**Dependent variable: CSRC**	
	(model 9)	**(model 10)**	**(model 11)**	**(model 12)**
Size	7.279*** (0.910)	9.495*** (1.880)	8.700*** (2.038)	14.404*** (3.801)
RMScore2	0.048 (0.073)	1.011 (0.762)	-0.060 (0.083)	2.418* (1.280)
Size x RMScore2		-0.044 (0.035)		-0.114* (0.061)
IND	1.505 (2.957)	1.630 (2.928)	-4.488 (4.292)	-4.167 (4.260)
ROA	-0.006 (0.148)	-0.001 (0.149)	-0.537 (0.445)	-0.523 (0.433)
Leverage	-0.028** (0.011)	-0.028** (0.011)	-0.021 (0.018)	-0.020 (0.018)
Tenure	0.054 (0.236)	0.044 (0.234)	-0.067 (0.243)	-0.093 (0.254)
Gender	1.423	1.642	3.361	3.923

	Dependent variable: CSR		Dependent variable: CSRC	
	(model 9)	**(model 10)**	**(model 11)**	**(model 12)**
	(4.298)	(4.256)	(9.751)	(11.157)
Constant	-104.895***	-153.072***	-169.682***	-293.693***
	(21.466)	(41.644)	(43.103)	(80.386)
Observations	128	128	128	128
R2	0.363	0.369	0.305	0.328
Adjusted R2	0.326	0.327	0.264	0.282
F Statistic	9.770***	8.711***	7.512***	7.248***

Notes: *p < 0.1; **p < 0.05; ***p < 0.01

Second, given that firm size can be approximated by various observable indicators (Shalit and Sankar, 1977), we also reran the analysis using alternative measures of firm size. While our original measure of total assets captures the firm's total resources (Dang et al., 2018), our alternative measures, namely the natural logarithm of the firm's sales (see also Coles et al., 2006; Serrasqueiro and Maçãs Nunes, 2008) and the natural logarithm of the firm's number of employees (see also Drempetic et al., 2020; Perrini et al., 2007; Serrasqueiro and Maçãs Nunes, 2008), relate to the companies' size in terms of product market competition and as an employer. Here, we aim to cover different aspects of firm size to better understand its influence on CSR performance and CSR controversies. We tested the alternative measure for both our main analysis as well as our supplementary analysis. The results are reported in Table C-7 and Table C-8 (models 13–28) and they again support Hypotheses 1a, 1b and 2b. In line with our original analysis, models 13, 15, 17, 19, 21, 23 and 25 show that sales and the number of employees are significantly positively associated with CSR performance (H1a, $p < 0.01$) and CSR controversies (H1b, $p < 0.01$). The results in model 16 represent the inclusion of the interaction between sales and CEOs' reputation management and confirm our previous result by showing that higher reputation management weakens the positive relationship between firm size and CSR controversies (H2b, $\beta = -0.271$, $p = 0.07$). Further, the results of our supplementary measure of CEOs' reputation management, namely CSR-related reputation management, remain robust and show the significant negative impact of the interaction between sales/ employees and CSR-related reputation management on CSR controversies (H2b, $\beta = -0.421$, $p = 0.03$, model 20 and $\beta = -0.197$, $p = 0.03$, model 28). As in our original analysis, we do not find significant results for the moderating effect on CSR performance.

Table C-7: Robustness check – Alternative measure for size (1)

	Dependent variable: CSR		Dependent variable: CSRC		Dependent variable: CSR		Dependent variable: CSRC	
	(model 13)	**(model 14)**	**(model 15)**	**(model 16)**	**(model 17)**	**(model 18)**	**(model 19)**	**(model 20)**
Sales	17.657***	22.527***	18.346***	32.701***	17.657***	22.527***	18.346***	32.701***
	(2.071)	(4.503)	(4.784)	(9.988)	(2.071)	(4.503)	(4.784)	(9.988)
RMScore	0.050	0.902	-0.055	2.456*				
	(0.067)	(0.778)	(0.081)	(1.352)				
CSRPosts					0.054	-0.820	-0.064	4.154**
					(0.073)	(2.047)	(0.204)	(1.844)
Sales x RMScore		-0.092		-0.271*				
		(0.082)		(0.150)				
Sales x CSRPosts						0.087		-0.421**
						(0.200)		(0.187)
IND	1.816	1.896	-3.604	-3.368	2.124	2.488	-11.137*	-12.896**
	(2.978)	(2.973)	(4.478)	(4.415)	(3.902)	(3.910)	(5.707)	(5.845)
ROA	-0.007	-0.003	-0.549	-0.536	-0.364*	-0.371*	-0.972***	-0.939***
	(0.172)	(0.171)	(0.549)	(0.544)	(0.193)	(0.197)	(0.268)	(0.275)
Leverage	-0.023**	-0.023**	-0.012	-0.012	-0.034	-0.035	-0.015	-0.008
	(0.011)	(0.011)	(0.016)	(0.015)	(0.024)	(0.025)	(0.028)	(0.030)
Tenure	0.002	-0.001	-0.183	-0.189	-0.168	-0.124	0.066	-0.148
	(0.251)	(0.253)	(0.244)	(0.255)	(0.590)	(0.578)	(0.395)	(0.419)
Gender	0.297	0.397	1.770	2.064				
	(4.578)	(4.616)	(10.122)	(11.677)				
Constant	-110.870***	-156.165***	-150.879***	-284.397***	-81.734***	-73.774**	-151.945***	-190.372***
	(21.375)	(43.886)	(43.226)	(90.805)	(28.766)	(32.550)	(56.465)	(64.311)
Observations	128	128	128	128	68	68	68	68
R2	0.376	0.381	0.258	0.282	0.378	0.381	0.327	0.358
Adjusted R2	0.339	0.339	0.214	0.234	0.317	0.309	0.260	0.283
F Statistic	10.320***	9.151***	5.950***	5.842***	6.191***	5.274***	4.931***	4.771***

Notes: *p < 0.1; **p < 0.05; ***p < 0.01

Table C-8: Robustness check – Alternative measure for size (2)

	Dependent variable: CSR		Dependent variable: CSRC		Dependent variable: CSR		Dependent variable: CSRC	
	(model 21)	(model 22)	(model 23)	(model 24)	(model 25)	(model 26)	(model 27)	(model 28)
Employees	7.063***	7.641***	6.672***	12.621**	6.556***	6.514***	6.317**	8.639***
	(0.927)	(2.095)	(2.248)	(5.040)	(1.285)	(1.582)	(2.792)	(3.144)
RMScore	0.057	0.155	-0.052	0.957				
	(0.068)	(0.374)	(0.085)	(0.650)				
CSRPosts					0.083	0.047	-0.006	2.019**
					(0.083)	(0.891)	(0.232)	(0.861)
Employees x RMScore		-0.011		-0.115				
		(0.040)		(0.078)				
Employees x CSRPosts						0.004		-0.197**
						(0.082)		(0.087)
IND	3.654	3.620	-1.530	-1.880	4.670	4.702	-8.156	-9.938*
	(2.953)	(2.974)	(4.527)	(4.459)	(3.849)	(3.928)	(5.651)	(5.684)
ROA	0.077	0.072	-0.475	-0.521	-0.209	-0.210	-0.842***	-0.821***
	(0.165)	(0.170)	(0.582)	(0.635)	(0.221)	(0.227)	(0.265)	(0.287)
Leverage	-0.023*	-0.023*	-0.010	-0.010	-0.038	-0.039	-0.016	-0.012
	(0.012)	(0.012)	(0.016)	(0.015)	(0.026)	(0.026)	(0.023)	(0.025)
Tenure	-0.137	-0.138	-0.346	-0.361	-0.174	-0.170	-0.012	-0.198
	(0.259)	(0.260)	(0.241)	(0.249)	(0.576)	(0.571)	(0.421)	(0.430)
Gender	-2.221	-2.138	-0.850	0.006				
	(5.056)	(5.090)	(10.975)	(11.686)				
Constant	-9.037	-14.073	-38.957**	-90.806**	1.063	1.443	-36.164	-57.219**
	(10.957)	(20.681)	(19.425)	(42.038)	(13.352)	(16.519)	(24.908)	(27.714)
Observations	128	128	128	128	68	68	68	68
R2	0.323	0.323	0.198	0.219	0.395	0.395	0.257	0.304
Adjusted R2	0.283	0.277	0.151	0.167	0.335	0.324	0.184	0.222
F Statistic	8.161***	7.093***	4.220***	4.172***	6.634***	5.594***	3.520***	3.737***

Notes: $^{*}p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$

C.5 Discussion

C.5.1 CEO's reputation management and CSR

The aim of the current study is to investigate the effect of firm size on corporate CSR performance and CSR controversies as well as the moderating role of CEOs' reputation management on these relationships. Using a sample of 128 Western European listed companies, the results show that larger firms demonstrate higher CSR performance than their smaller counterparts, but they are also involved in more CSR controversies. These findings are in line with our baseline hypotheses as well as the findings of several previous studies that have shown positive relationships between firm size and CSR performance (e.g. Choi et al., 2020; McWilliams and Siegel, 2001; Udayasankar, 2008) as well as firm size and CSR controversies (e.g. Jeong and Kim, 2020; Liu, 2018; Oh et al., 2018).

Regarding the moderating role of CEOs' reputation management, we expected CEOs actively managing their reputation via LinkedIn to exert a strengthening (weakening) effect on the positive relationship between firm size and CSR performance (CSR controversies), as they could personally benefit from the reputational gains of a progressive CSR commitment. However, we find no significant effect of CEOs' reputation management on the relationship between firm size and CSR performance, neither for general nor for CSR-related reputation management. With regard to CSR scandals, we do find a weakening effect of CEOs' reputation management on the positive association between firm size and CSR controversies. Further supporting this finding, our analysis of CEOs' CSR-related reputation management also shows a significant weakening effect.

Taken together, these results suggest that the CEOs of large firms who actively seek to build and maintain a good reputation are rather putting their focus on keeping CSR scandals at bay instead of investing more in CSR activities. The weakening effect on CSR controversies is understandable and can be explained by the fact that any scandals and controversies lead to reputation losses for the firm and, subsequently, the CEO. Especially for listed companies, which are more sensitive to market reactions than non-listed firms, publicised CSR scandals can cause major repercussions that also affect the CEO as the figurehead of the company.

While the weakening influence of CEOs' reputational ambitions on CSR controversies is thus intelligible, the insignificant effect on CSR performance is more interesting. As CSR can be understood as a reputation-enhancing tool itself, it is surprising that CEOs actively managing their own reputation seem to not use it as such or at least do not further boost it. This is extra peculiar given that previous research has found significant positive influences of positive CSR

news on stock prices (e.g. Pérez et al., 2020; Serafeim and Yoon, 2022), which demonstrates that those firms receive the positive attention that goes along with reputation gains for the CEO.

We have three potential explanations for this phenomenon. First, public pressure leads firms, especially large ones with high influence, to invest in CSR activities. However, these CSR investments not only offer the chance to improve one's reputation by doing good, but also lead to a risk that profitability will decrease and volatility will rise (Barnea and Rubin, 2010), which in turn could result in reputation losses. To balance this trade-off, it might be more promising for CEOs concerned about their reputation to avoid becoming involved in CSR scandals while, simultaneously, promoting their firms' current CSR activities than risking overinvesting in CSR. Although their engagement may only resemble an average commitment, regular promotion coupled with the absence of CSR controversies may still lead people to perceive such CEOs as socially responsible, which might thus enhance their reputation. Consequently, active reputation management by CEOs in large firms does not have a strengthening effect on CSR performance. The second potential explanation is grounded in agency theory. CSR engagement is subject to information asymmetries since CEOs and their top management team know more about the firm's CSR strategies and policies than outsiders (Cui et al., 2018a). While the CSR information shared in company reports is often audited by third parties and therefore more reliable, content published on social media is not audited or verified. This opens up the opportunity for CEOs to present themselves and their firms in the best possible light. By frequently posting CSR-related content as well as including minor exaggerations, they may appear more CSR-conscious than they actually are and especially than they implement in their company. CEOs interested in managing their reputation can therefore use social media accounts as self-marketing tools to receive positive, reputation-enhancing attention without increasing CSR performance. Lastly, we may not have found a significant moderating effect on CSR performance due to the limited sample size. Nonetheless, even if there were an actual effect, this effect would probably still be lower than the weakening effect on CSR controversies, making it interesting on its own and in need of explanation.

C.5.2 Implications for theory and practice

Our findings contribute to different streams of literature. First, we contribute to the large body of CSR literature in several ways. In particular, we add to the broader discussion on the impact and relevance of firm size as an explanatory variable of CSR performance and CSR controversies. Moreover, we shed light on the so far underexplored influence of CEOs' reputation management on CSR by showing that while we do not find a moderating influence

on the relationship between firm size and CSR performance, it does exert a weakening effect on the firm size–CSR controversies relationship. Given that most CSR studies in the European context have investigated the direct impact of either contextual factors or executives' characteristics on CSR separately, our study also contributes to closing an important research gap by bridging both research streams. As CSR offers high managerial discretion, but is simultaneously limited by firms' resources, examining the combined influence of contextual factors and CEOs' motivations is crucial to provide a complete understanding of CSR decision-making in organisations. Our focus on CEOs' reputational ambitions as a behavioural driving force further extends the range of examined individual-level drivers that influence CSR, which have so far mainly focused on surface-level characteristics such as age, gender and education. Behavioural characteristics are much more specific and therefore important drivers whose influence needs to be investigated. Second, we contribute to the growing literature that explores how managerial characteristics, values and motivations influence corporate decisions. Specifically, our finding that CEOs' active reputation management plays a moderating role on companies' engagement in CSR controversies enriches upper echelon theory by revealing that a leader's reputational ambitions, as a contingent condition, may mitigate the negative effect of a contextual factor on firms' CSR behaviour. Third, we add to the literature on CEO reputation/impression management by introducing a new measurement of reputation management based on CEOs' LinkedIn profiles and posting information. Prior research on this topic has predominantly relied on information from firms' websites (e.g. Pollach and Kerbler, 2011) or, in the case of already established reputations, CEO rankings (e.g. Sanchez-Marin and Baixauli-Soler, 2014) as well as mentions in the traditional press (e.g. Francis et al., 2008; Weng and Chen, 2017). Using information from CEOs' social media appearances, we consider the increasing importance of social media for businesses in recent years and its ability to build, influence and sustain a reputation.

Our findings also have practical implications. Most importantly, they suggest that CEOs are emphasising 'doing no harm' rather than 'doing good'. Although they present themselves as caring for environmental and social issues and strive to build an appropriate reputation, this does not necessarily correspond with their CSR-related decision-making within the firm. Of course, social media platforms, with their wide reach and freedom of content sharing, are tempting to use as reputation-enhancing marketing tools. It is also far easier to symbolically present oneself as a CSR advocate by continuously posting CSR-related content than developing such an image through substantial action. Nevertheless, such behaviours increase stakeholders' scepticism, which could be detrimental for companies. Several studies have

already shown that public trust in the CSR communication of firms and their executives is low and that companies' CSR claims are questioned critically (e.g. Globescan, 2010; Kanter, 2009; Kim and Rim, 2019). Our findings demonstrate that this scepticism is not arbitrary and that CEOs should therefore ensure a better balance between their CSR-related self-presentation and actual CSR engagement. Especially when they are interested in building a lasting reputation, it is important for CEOs not to 'put on a show' but rather promote their real commitment. Particular care should be taken when the mismatch between social media communication and actual CSR performance becomes too large and obvious, as such behaviour can even be identified as CSR-/greenwashing, which goes along with negative market reactions, loss of investor confidence as well as negative impacts on performance and reputation (Lyon and Montgomery, 2015; Walker and Wan, 2012). To prevent such negative consequences, it might be valuable for companies to expand their internal control mechanisms regarding external communication to include social media representations. Encouragingly, our results show that CEOs concerned about their reputation are at least exerting a weakening effect on CSR controversies, meaning they are involved in fewer scandals. However, not being involved in controversies does not equate to good CSR performance. To support progress towards true sustainability, it is therefore crucial that policymakers are aware of the fact that CEOs' personal motivations and preferences significantly influence their CSR-related decision-making. Only this way they can create appropriate incentives to foster a comprehensive CSR strategy e.g. through bonuses and salary components linked to CSR performance.

C.5.3 Limitations and future research directions

Like any research, our study is not without limitations that represent opportunities for future research. First, our empirical results are based on a relatively small sample of firms and should therefore be considered somewhat exploratory in nature. Although we based our study on a potentially large population of listed companies from seven Western European countries, a reduction in sample size was inevitable due to the limited availability of CSR and CSR controversy scores as well as CEOs' LinkedIn profiles. Future research on this topic should rely on larger samples and moreover test the effects in other countries, as cultural backgrounds may influence decision-making (Lemma et al., 2022) and perceptions of the importance of reputation (Dupont and Karpoff, 2020). Second, we used cross-sectional data that may not be free of potential endogeneity issues. Using an instrumental variable approach could be a solution for this problem, if a correct instrumental variable can be found. However, as our database does not consist of any valid instruments for our main independent variables, we

cannot perform the usual instrumental variable regressions to cope with potential causality concerns. Nonetheless, based on theoretical considerations, we argue that reverse causation logic, where the CSR performance of a firm increases firm size, is less likely with CEO reputation management as a moderator, which eases endogeneity concerns. Future research that relies on panel data would nevertheless be helpful to improve our knowledge of the causal connections. Third, we constructed new proxies to measure CEOs' reputation management and CSR-related reputation management based on social media appearances and activities. Although these proxies represent reliable measures of CEOs' reputation management, we cannot argue that these are the most accurate ways of determining leaders' reputational ambitions. Future research could therefore replicate the study using different measures of CEOs' reputation management. Fourth, our study focused strictly on CEOs' discretion, as the CEO is the key decision-maker in an organisation (Chen et al., 2009; Li et al., 2016). Important in this regard is that we do not presume that CEOs make decisions in isolation. Rather, we expect them to shape the context in which firm decisions are made in the long term by, for example, establishing incentives, adopting administrative arrangements and selecting top managers and consultants. Hence, their motivations and values influence organisational policies in multiple ways, far beyond direct, single-handed decisions (Chin et al., 2013). Nevertheless, it is important to examine the relationships and interactions between the reputation management of the whole top management team and CSR, and a qualitative research approach might be a better fit to open this black box. Lastly, we relied on Eikon's ESG scores to measure CSR performance and CSR controversies. Although the general confidence in those CSR ratings among academics and practitioners is high (Bouten et al., 2017), rating agencies such as Eikon are often criticised for their subjective rating processes as well as the highly interpretable data sources they use (Entine, 2003). Given that other commonly used variables (e.g. self-developed CSR scores based on the content analysis of individual CSR reports) face similar problems, we accept this limitation and emphasise the need for future research that replicates this study using different CSR measures to check the robustness of our results.

C.6 Conclusion

It is without question that CSR is important to the financial performance and competitive advantage of firms and that a certain level of engagement is nowadays expected by stakeholders. Therefore, if companies have the necessary opportunities and resources, it would be sensible to use them to implement a progressive CSR commitment. However, companies are run by humans whose decisions are never rational, but the result of their own values,

motivations and experiences. The actual decision on whether to use the firm's potential in terms of realising a comprehensive CSR strategy is hence highly shaped by the company's key decision-maker. Against this background, our study sheds light on the so far underexplored influence of CEOs' reputational ambitions as an intrinsic motivator on the relationships between firm size and CSR performance as well as CSR controversies. We found that the positive relationship between size and CSR controversies is significantly weaker when CEOs put higher efforts into their reputation management via social media. This same effect was also found for CEOs who present themselves as especially caring for CSR topics in their postings. With regard to CSR performance, we did not find a corresponding significant strengthening effect, neither of the CEO's general reputation management nor of CSR-related reputation management. Consequently, our results are twofold. On the one hand, they highlight the importance of the effect of the CEO's reputational ambitions on the firm size–CSR controversies relationship, thereby contributing to the underexplored role of behavioural driving forces on CSR. On the other hand, our results do not reveal a moderating effect of the CEO's reputation management on the firm size–CSR performance link, suggesting that CEOs who care for their reputation and present themselves as very CSR-conscious on social media place a higher focus on preventing damage from CSR scandals than on improving actual CSR performance. Especially the mismatch between CSR communication and CSR-related decision-making within the firm can raise stakeholder scepticism and should be avoided through better monitoring.

C.7 References Section C

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D A shut mouth catches no flies? –Analysing the transparency of ESG controversies in corporate reporting within the textile and pharmaceutical industry

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D.1 Introduction

Sustainability reporting has become a common practice to communicate corporate commitment to and performance on sustainability topics (Boiral et al., 2019a; Hahn and Kühnen, 2013; Perego and Kolk, 2012). A transparent, true and fair view over firms' environmental, social and governance (ESG) related activities and impacts is expected in order to reduce the existing information asymmetries between companies and their stakeholders (Archambeault et al., 2008; Hahn and Lülfs, 2014). However, even though the number of reporting companies is steadily increasing and the scope and depth of disclosures are improving (Hąbek and Wolniak, 2016; Leszczynska, 2012; Tsalis et al., 2020), doubts about the credibility and reliability are still widespread in research and public. The main criticism raised in this vein is the pseudo-transparency of the reporting (Coombs and Holladay, 2013), which manifests itself in an abundance of overly positive information to showcase the company's commitment, while camouflaging information regarding poor performances (Demir and Min, 2019; Michelon et al., 2015). Most stakeholders therefore expect large parts of sustainability reporting to be whitewashed in order to serve as public relations tools (Cho et al., 2015; Higgins and Walker, 2012).

Given this criticism and scepticism, an increasing stream of literature has investigated the quality of corporate sustainability reports (e.g. Michelon et al., 2015; Sethi et al., 2017; Turzo et al., 2022). The majority of these studies have concentrated on the disclosure of performance information related to the common ESG categories, whereas a limited number of papers have explicitly considered or even specifically focused on the dark side of ESG, namely the reporting of corporate ESG controversies and scandals (e.g. Einwiller and Carroll, 2020; Hahn and Lülfs, 2014). ESG controversies refer to incidents, activities or practices of a company that have a negative impact on, or pose risks to, the environment, society or aspects of corporate governance (e.g. DasGupta, 2022; de Franco, 2020; Passas et al., 2022). The fact that they are comparably under-researched in the context of sustainability reporting quality is rather surprising, as the disclosure of irresponsible ESG activities is crucial for providing a complete and balanced picture of firms' ESG situation and performance. Sustainability reporting guidelines such as the Global Reporting Initiative (GRI) even call on companies to include not only positive but also negative contributions to sustainability into their reports (GRI, 2016). However, given that the regulations in most countries in this context are very vague, if they exist at all, reporting on negative ESG aspects can still be considered de facto voluntary, which puts companies in a dilemma. On the one hand, disclosing negative contributions helps to reduce stakeholders' scepticism towards firms' reporting by providing complete and

transparent information about their actual ESG situation. Moreover, the open communication of ESG misconduct may be understood as a positive sign about the way that the respective firm takes responsibility for its actions, manages its risks and thus works on avoiding future incidents (Hahn and Lülfs, 2014; Melinda and Wardhani, 2020; Reimsbach and Hahn, 2015). On the other hand, the disclosure of ESG controversies also carries multiple risks, such as negative financial performance and increased stock market risk, as sustainability issues represent value-relevant information to which investors react very sensitively (Capelle-Blancard and Petit, 2019; Dhaliwal et al., 2012; de Vincentiis, 2022). Especially if the controversies are in stark contrast to the societal norms, values and beliefs of stakeholders, they can entail serious consequences for the company and even endanger its legitimacy (Chan and Milne, 1999; Davies and Olmedo-Cifuentes, 2016).

Against this background, it is necessary to examine how companies deal with this dilemma in practice. Interestingly, most studies on ESG controversy disclosure have so far investigated how companies rhetorically report negative ESG impacts and which legitimation strategies they use in this context (e.g. Boiral, 2016; Einwiller and Carroll, 2020; Hahn and Lülfs, 2014; Talbot and Boiral, 2018). Considerably fewer studies have drawn attention to the quantity of negative ESG disclosure. Einwiller and Carroll (2020), for example, found that the proportion of negative ESG contributions in sustainability reports for a sample of 75 firms from the Forbes Top 500 list in 2014 was very low. Moreover, their results showed that externally assured reports included more negative ESG disclosures than reports that were not assured. One of the latest findings regarding the quantity of ESG controversy reporting stems from KPMG's Survey of Sustainability Reporting 2020, which states that only 14% of N100 and 10% of G250 companies provide balanced reporting with information on positive and negative SDG impacts (KPMG, 2020). Striking in this vein is the fact that all these investigations were purely based on the controversies reported within the companies' sustainability reports. Research that also includes information about the actual controversies that occurred and relates these to the reported ones is, to the best of our knowledge, currently missing. This is surprising as such relations are essential in assessing the transparency of controversy reporting. The study of Boiral (2013) is an exception, as it uses a corresponding approach, but its findings are already outdated due to the focus on the year 2007. To close this important research gap and contribute to the discussion on the quality of sustainability reporting, our study therefore builds on externally collected controversy information to evaluate the actual reporting practice of negative ESG contributions. We shed further light on the dilemma of controversy disclosure and examine in detail how companies handle their ESG controversy reporting.

We focus our analysis on the pharmaceutical and textile industry, as we perceive them to play a decisive role in recent ESG scandals. Even though they do not belong to the classic 'controversial' or 'dirty industries' like mining, nuclear, tobacco, cement or energy (Cai et al., 2012; Dupire and M'Zali, 2018), various severe controversies occurred during the last decade, e.g. environmental antibiotic pollution in pharmaceutical production processes (Manaia et al., 2020), extensive opioid marketing of U.S. pharmaceutical companies (Eisenberg et al., 2020), Uighur forced labour and human rights violations in Xinjiang cotton plants (Kelly, 2020), genetically modified cotton or chemical pollution in Asia (Niinimäki et al., 2020), to just name a few. Moreover, both industries are characterised by the fact that people are dependent on their goods and that it is hard or even impossible to circumvent their products. A deeper analysis of the actual ESG controversy disclosure practice is therefore important in order to draw conclusions about the quality of reporting in these sectors.

The structure of the paper is as follows. The second section provides the theoretical background of the research and gives an overview of the current literature. The third section illustrates the sample and research method employed for the empirical analysis. The fourth section reports the findings of our in-depth analysis and the last section discusses and concludes.

D.2 Theoretical background and literature review

D.2.1 Sustainability reporting and its theoretical roots

Sustainability reporting can be described as the process of communicating the environmental, social and governance effects of organizations' economic actions to particular interest groups within society and to society at large (Buallay, 2019; Darnall et al., 2022; Gray et al., 1987). Even though it has been around for several decades, the attention it received has rather ebbed and flowed: after being a hot-topic in the late 1970s and early 1980s and then nearly vanishing in the following decade (Gray, 2002), it returned to the spotlight in the mid-1990s and is receiving steadily growing attention ever since (Deegan, 2002). Along with its increasing widespread among corporations as well as high interests from governments, researchers, industry and accounting bodies, also the number of terms for sustainability reporting has increased perceptibly (see also Kotonen, 2009). 'Social and/or environmental disclosure' (e.g. Jenkins and Yakovleva, 2006; Lu and Abeysekera, 2014; Mallin et al., 2013), 'ESG reporting' (e.g. Arvidsson and Dumay, 2022; Bravo and Reguera-Alvarado, 2018), 'sustainability disclosure' (e.g. Mahmood et al., 2018; Michelon and Parbonetti, 2012), 'CSR reporting' (e.g. Fortanier et al., 2011; Tschopp and Huefner, 2015) or 'environmental and social review' (O'Dwyer and Owen, 2005), are just a few of the commonly used labels. As these terms all refer

to the corporations' efforts to communicate their environmental, social and governance performance, and in line with several previous studies (e.g. Almeida Machado et al., 2021; Amran et al., 2014), we use the term sustainability reporting interchangeably with the terms CSR, ESG and social reporting in this paper.

While in the beginning it was mainly becoming a trend among large companies to report their ESG achievements, in recent years this development has also caught on with small and medium-sized enterprises (e.g. Arena and Azzone, 2012; Corazza, 2017; Krawczyk, 2021; Morsing and Spence, 2019). The concrete motivations for disclosing such reports are manifold, but can primarily be explained by two opposing theories. First, by the economics-based voluntary disclosure theory (Dye, 1985; Lang and Lundholm, 1993; Verrecchia, 1983) which predicts that companies with good sustainability performance have an incentive to disclose information regarding their performance to signal their ambitious strategy (Clarkson et al., 2008) and simultaneously reduce information asymmetries between themselves and relevant outside stakeholders (Hahn and Lülfs, 2014). Given that it is very difficult for external parties to obtain credible information on sustainability aspects, proactive reporting with a focus on objective and hard measures, is important for good-performing companies to inform their stakeholders about their sustainability performance, and also makes it possible for them to increase their reputation and distinguish themselves from poor-performing competitors (Boiral, 2013; Cho et al., 2012; Clarkson et al., 2008). As their focus and motivation lie in providing adequate information to the public, the truthful disclosure of arisen ESG controversies and the efforts they undertake to prevent such incidents in the future are integral parts of their reporting. Through such balanced reports, these companies demonstrate their strong commitment towards sustainability, their ongoing efforts to improve as well as their ambition to provide stakeholders with a fair view of their sustainability performance. Thus, from the perspective of voluntary disclosure theory, the level of sustainability disclosure can be understood as an indicator of a firm's actual commitment in this area (Bewley and Li, 2000; Clarkson et al., 2008). In contrast to the voluntary disclosure theory is the socio-political legitimacy theory (Gray et al., 1995a). According to the legitimacy theory, companies consider sustainable development as a response to external institutional pressures, which leads to actions that are primarily intended to improve the firm's image among stakeholders (Adams, 2004; Deegan, 2002; Gumb, 2007; Hooghiemstra, 2000). This viewpoint is based on the notion that companies need to show that they operate within the boundaries of society, because they are only conferred with legitimacy to the extent that their activities are consistent with the goals of the superordinate system or societal expectations (Mathews, 1993; Parsons, 1992). As organizations act in multiple

exchange relationships with various stakeholders and depend excessively upon resources from their environment (e.g. employees, customers, public authorities), meeting their stakeholders' growing expectations about the way companies should conduct their business becomes a priority to gain and maintain legitimacy (Hahn and Lülfs, 2014). Deegan (2002) even brings forward that corporations will only continue to exist if society gives them legitimacy, resulting in the circumstance that they will make sure that outside parties perceive their activities as congruent with their expectations. The level of congruence between a companies' activities and societal expectations can therefore be seen as a direct reflection of its legitimacy (Dowling and Pfeffer, 1975; O'Donovan, 2002). However, the high focus on companies' projected image to outside stakeholders and society does not necessarily lead to a substantive integration of proper reporting practices, but rather paves the way for a symbolic and superficial approach that is primarily intended to showcase the organization's social responsibility (Milne et al., 2006; Wagner et al., 2009). The concern for the firm's image and social legitimacy favours an impression management and marketing rationale aimed at seducing and convincing instead of directly presenting the company's situation (Cho et al., 2012; Cho and Patten, 2007; Hooghiemstra, 2000; Milne et al., 2006; Wagner et al., 2009), including the presentation of excessively positive contributions and the intentional omission of any negative incidents. Thus, from the legitimacy perspective, organizations exposed to strong external pressures due to poor sustainability performance are motivated to disclose sustainability reports in order to improve their social legitimacy (Cho et al., 2012). Summing up, while the voluntary disclosure theory focuses on intrinsic motivation based on actual good performance as the main motive for sustainability reporting, the legitimacy theory takes the contrary approach that reporting is done solely in response to extrinsic pressure and is moreover used to conceal poor performance instead of supporting good performance.

D.2.2 The problem of transparency in a widely unregulated reporting context and a scandal-loaded business world

The disclosure of sustainability information is still largely unregulated. To assist companies in providing useful information, plenty of international and domestic sustainability reporting standards, guidelines, principles and initiatives have emerged over the last two decades (Tschopp and Huefner, 2015). These standards often differ noticeably in terms of their recommendations and requirements for disclosing sustainability aspects. However, what they have in common is the attempt to foster transparency in firms' reporting. Transparency is almost universally considered desirable and relates to the reporting of key information to prevent

misrepresentation of financial and sustainability data (Coombs and Holladay, 2013; das Neves and Vaccaro, 2013; Higgins et al., 2020). Especially in the business context it can contribute to the effective functioning of markets (Bushman et al., 2004), lead to operational improvements (Gani et al., 2021; Liu et al., 2022; Parris et al., 2016) and foster trust between stakeholders and organisations (Norman et al., 2010; Schnackenberg and Tomlinson, 2016). It therefore represents a key value in corporate communication. Nonetheless, even though the commitment to transparency offers multiple advantages – particularly in the long run – it is not always easy to stick to, from a firm's perspective. Generally speaking, being transparent is simple when it comes to good performances, but much harder when it comes to bad performances, like ESG controversies, as it means disclosing failures and weaknesses, which carries idiosyncratic risk (Mishra and Modi, 2013) and may endanger legitimacy (Chan and Milne, 1999). In traditional financial reporting, transparency is ensured by strict regulations regarding the content and format of the reports, resulting in reliable and easily comparable information (Sethi et al., 2017). However, this state has evolved over the past 100 years. In comparison, sustainability reporting is still in its infancy and suffers from multiple shortcomings related to consistency, comparability and reliability (Pinnuck et al., 2021; Tschopp and Huefner, 2015). Most significantly, there are currently no clear rules for assessing the materiality of ESG aspects (Schwoy and Dutzi, 2021). These circumstances – no sufficient regulation and potential negative consequences for disclosing bad performances – combined with the fact that ESG scandals do indeed pop up on a regular basis in the business context, especially among larger firms (Dorfleitner et al., 2022; Schwoy et al., 2023), raise major doubts about the transparency of ESG controversies in corporate sustainability reporting and thus about the provision of balanced information on companies' ESG performance for stakeholders as a whole.

In the absence of 'forced' transparency, true transparency can be achieved by ensuring that stakeholders are able to identify relevant areas of sustainability disclosure, find information on those areas in corporate reports and assess whether it sufficiently meets their informational needs (Coombs and Holladay, 2013). Moreover, to particularly demonstrate their trustworthiness, companies can enhance the credibility of the disclosed information by adhering to voluntary sustainability reporting guidelines and by having their sustainability information audited by external parties (Abernathy et al., 2017; Caputo et al., 2021; Coombs and Holladay, 2013; Martínez-Ferrero and García-Sánchez, 2017). Thus, for assessing the transparency and, consequently, the quality of ESG controversy reporting, four key elements are of crucial importance: the reporting medium, the disclosure quality, the use of reporting guidelines and the engagement of external assurance providers. To gain a sound understanding, we will

therefore analyse the reporting practice along these four core elements of transparency and introduce specific research questions for each element in order to be able to draw informed conclusions on the current state of controversy disclosure quality in the pharmaceutical and textile industries.

Reporting medium

In the 1990s Gray et al. (1995b) brought forward that all forms of information entering the public domain present avenues for sustainability reporting and should therefore be considered as part of the accountability-discharge activity. Over the last decade, however, two options have emerged as the main reporting channels: dedicated sections in the companies' annual reports, making them integrated reports, or individual stand-alone reports for sustainability issues (Jensen and Berg, 2012; Rupley et al., 2017; Sethi et al., 2017). Both approaches offer some characteristics that have the potential to be equally conducive and obstructive for ESG controversy disclosure. The stand-alone reports on the one hand, provide the necessary space to elaborate on positive and negative sustainability aspects, but hereby also increase the risk of setting the wrong focus, which manifests in information overload combined with the use of CSR-washing techniques, i.e. emphasising positive performance measures instead of providing balanced information on all relevant ESG topics (Delmas and Burbano, 2011; Velte, 2022). Integrated reports, on the other hand, are more narrow, encouraging companies to focus on material issues within their disclosure (Sethi et al., 2017). However, as there are hardly any binding guidelines for evaluating the materiality of ESG topics, integrated reports are tempting to simply neglect unpleasant incidents.

Despite these potential obstructions, ESG controversy disclosure should be located within the stand-alone reports or within the ESG sections of annual reports, as it ensures that all important sustainability information is presented coherently in one place. Nevertheless, as severe controversies may also lead to litigation and negative effects on financial results, it is also conceivable that companies provide information on ESG controversies within their financial reporting. Given these diverse reporting options, two aspects are of major interest regarding the location of ESG controversy disclosure: first, the general reporting medium in which the information is disclosed; and second, the explicit location in the reporting medium where the reporting is made. We therefore investigate the following research question:

RQ 1: In which reporting medium and at which exact location within the medium are ESG controversies disclosed?

Disclosure quality

Companies potentially have a lot to gain or lose from stakeholder perceptions (Coombs and Holladay, 2013). Their disclosure practices will therefore always be strategically designed to present a favourable overall picture of their corporate situation. In line with this, several previous studies have found overly positive and optimistic tones within sustainability disclosures (Al-Shaer et al., 2022; Archambeault et al., 2008; Holder-Webb et al., 2009; Melloni et al., 2017; Richards et al., 2015) as well as the presentation of an abundance of good news (Chauvey et al., 2015; Hubbard, 2011; Jeriji and Louhichi, 2021). However, to remain credible, it is important that companies report at least some failures and setbacks, as an excess of whitewashed information reinforces the image of corporate hypocrisy and thus leads to negative stakeholder attitudes towards the firm as a whole and the reliability and usefulness of their reports in particular (Diouf and Boiral, 2017; Einwiller and Carroll, 2020; Wagner et al., 2009). Accordingly, recent research findings suggest that companies integrate moderately negative ESG information into their reporting. The overall proportion of these negative incidents, however, is still very low (e.g. Boiral, 2013; Einwiller and Carroll, 2020; KPMG, 2020), the descriptions are kept rather concise (Hahn and Lülfs, 2014), and the employed legitimation strategies within the reports are primarily focused on modifying stakeholders' perception through marginalization or abstraction, instead of providing substantial legitimacy, such as changes in structures, actions, or objectives (Hahn and Lülfs, 2014). Given this likely distorted reporting practice, it is questionable which controversies companies consider 'worth' reporting and how helpful the disclosure of these negative incidents actually is in meeting stakeholders' information needs. Our second research question therefore aims to analyse the phenomenon more deeply:

RQ 2: What ESG controversies are disclosed and is there a difference in the scope and level of detail of disclosure depending on their topic area?

Reporting guidelines for sustainability disclosure

To address the existing regulatory gap in terms of ESG disclosure, several international standards have been developed over the past decades to provide guidance for companies in their sustainability reporting. These standards generally not only help to determine the content and structure of the report, but also propose indicators, technical recommendations and protocols to improve the transparency, accuracy and pertinence of sustainability disclosures (Brown et al., 2009; Moneva et al., 2006; Searcy and Buslovich, 2014). The leading, most-used framework in this context is the GRI, followed by the United Nations Global Compact's Communication on

Progress and AccountAbility's AA1000 Series (Tschopp and Huefner, 2015). For companies, the application of these standards offer two major advantages. On the one hand, they can demonstrate that they are making an effort to provide transparent, comparable and complete information to their stakeholders by sticking to a rigorous, structured and standardized framework. On the other hand, the standards also support them in gaining a better understanding of the concept of sustainable development in general and how to incorporate and implement respective considerations into their strategic and operational decision-making and processes (Boiral and Henri, 2017). Especially against the background that most guidelines explicitly challenge companies to provide information on negative ESG contributions (e.g. AccountAbility, 2018; GRI, 2016), the use of such standards may also lead to companies becoming more sensitive to the importance of balanced reporting. Some studies in a similar context have indeed found positive effects of the application of sustainability reporting guidelines on the overall disclosure quality of sustainability information (e.g. Fortanier et al., 2011; Hąbek and Wolniak, 2016; Khan et al., 2021). However, as none of these guidelines are mandatory for reporting, companies ultimately still have a lot of freedom and flexibility in the way they disclose their ESG information and can also use the respective standards in a biased way by benefitting from their symbolic power without fully adhering to them (e.g. Michelon et al., 2015; Moneva et al., 2006; Talbot and Boiral, 2018). Particularly with regard to the reporting of negative aspects, which are usually difficult to detect from the outside, a lot of discretion remains with the companies. Given these potentially opposing effects of sustainability reporting guidelines on the actual reporting, we posit the following research question:

RQ 3: Are ESG controversies more likely to be reported and more fully reported if the report has been prepared in accordance with the GRI or other sustainability guidelines?

External assurance of sustainability disclosure

While the application of sustainability reporting guidelines can already be used to foster stakeholders' perception that companies are striving to keep their reports as complete as possible, the most effective tool for promoting confidence in the transparency of the reporting is the use of a third-party assurance (DeBeelde and Tuybens, 2015; Kolk and Perego, 2010; Park and Brorson, 2005). In general, such independent audits can be described as engagements 'in which an assurance provider evaluates and expresses a conclusion on an organisation's disclosure about its performance and underlying processes, systems, and controls against suitable criteria in order to enhance the credibility and legitimacy of the information for the

intended audience' (AccountAbility, 2018, p. 36). In terms of sustainability disclosure, external audits are assumed to reduce uncertainty and information asymmetries on the part of stakeholders (Gürtürk and Hahn, 2016; Moroney et al., 2012) and at the same time exert a disciplining and encouraging effect on companies regarding their strategic and operational sustainability practices (GRI, 2016; Park and Brorson, 2005). Several recent studies in this context have found positive effects of assurance on the disclosure quality of ESG information (e.g. Ballou et al., 2018; Maroun, 2019) and also the assumption of increasing stakeholder trust is clearly confirmed by previous research findings. For example, Cheng et al. (2015), Pratoomsuwan and Chiaravutthi (2023) and Shen et al. (2017) found that ESG assurance increases non-professional investors' willingness to invest, Pflugrath et al. (2011) showed that financial analysts perceive the credibility of ESG information greater when they are assured and Casey and Grenier (2015) were able to demonstrate that assuring sustainability reports leads to lower cost of equity capital as well as lower analyst forecast dispersion and errors. As a consequence, the number of companies voluntarily seeking assurance for their sustainability disclosure is steadily increasing (KPMG, 2020). However, in light of the fact that people tend to rely on peripheral cues when assessing messages (Petty and Cacioppo, 1986), i.e. factors that may bypass active critical thinking such as statements from authority figures or experts (e.g. assurance statements) (Coombs and Holladay, 2013), there are also multiple researchers critically scrutinising the confidence in such ESG assurances, highlighting the questionable assurance-provider independence (Ball et al., 2000; Dando and Swift, 2003; Perego and Kolk, 2012), the managerial capture of information (Boiral et al., 2019a; Michelon et al., 2015), the lack of involvement of stakeholders in the assurance process (Adams and Evans, 2004; Seguí-Mas et al., 2015) and the professionalization of assurance providers overall (Boiral and Heras-Saizarbitoria, 2020; Hummel et al., 2019). Against this background, we are keen to analyse whether third-party audits influence the quality of ESG controversy disclosure and therefore pose the following research question:

RQ 4: Are ESG controversies more likely to be reported and more fully reported if the report has been audited by a third party?

D.3 Methodology

D.3.1 Sample and data sources

To answer our research questions, we construct a research sample that consists of ESG controversies from listed textile and pharmaceutical companies of the years 2018-2020. We derived the sample companies as well as information regarding their ESG related controversies

from the Refinitiv Eikon database (formerly Thomson Reuters). Refinitiv is one of the most comprehensive ESG databases that collects data on more than 630 different ESG metrics (Refinitiv, 2021). While the ESG score measures the firm's ESG performance based on publicly-reported information, Refinitiv also offers an ESG controversies score which is calculated on the basis of public media materials on 23 ESG controversy topics (including, among others, child labour, human rights, environmental conditions, tax fraud and business ethics). For every scandal that occurs during a fiscal year the company involved is penalised depending on the severity of the controversy, so that each firm ends up with an ESG controversy score ranging between 0 and 100, where 100 means that the company has not been involved in any controversial behaviour and 0 represents engagement in multiple severe ESG controversies (Refinitiv, 2021). In addition to the controversy score itself, Refinitiv also discloses the related web addresses to the news articles that informed about the controversial ESG incidents. Given that Refinitiv does not offer a function to directly select ESG controversies, we first selected those textile and pharmaceutical companies that have been involved in severe scandals in the period of 2018-2020 by setting a filter to those firms that achieved an ESG controversy score smaller or equal to 50 in at least one of the three observed years. This left us with a total of eight textile companies and twelve pharmaceutical companies. We had to exclude four pharmaceutical companies due to the fact that they had insufficient data, which led us to a final sample of 16 companies. The sample companies can be found in Table D-1. For each company, we collected the news articles on the controversies indicated in Refinitiv for the years 2018-2020 as well as all published company reports (annual/integrated reports and all stand-alone reports like sustainability reports, environmental reports, CSR reports, impact reports, etc.) for the respective years from the companies' websites. In total, our analysis comprises 190 controversies on which we search for information in 104 company reports.

Table D-1: Sample companies

Textile companies	Pharmaceutical companies
Cato Corp, USA	Bayer AG, Germany
Guess? Inc, USA	Endo International PLC, Ireland
Kering SA, France	GlaxoSmithKline PLC, UK
LVMH Moet Hennessy Louis Vuitton SE, France	Johnson & Johnson, USA
Nike Inc, USA	Mallinckrodt PLC, Ireland
Skechers USA Inc, USA	Moderna Inc, USA
Superdry PLC, UK	Pfizer Inc, USA
Under Armour Inc, USA	Teva Pharmaceutical Industries Ltd, Israel

D.3.2 Data analysis

In order to make valid, replicable interferences from the qualitative textual data of the company reports (Krippendorff, 1980), and in line with multiple other studies in the ESG reporting context (e.g. Jose and Lee, 2007; Landrum and Ohsowski, 2018; Pistoni et al., 2018), we used content analysis techniques to examine the disclosure practice of ESG controversies. More precisely, we relied on the conceptual content analysis method, which is characterized by selecting certain concepts for investigation and analysis and then quantifying and evaluating their presence in the selected texts (Jose and Lee, 2007). The analysis hereby goes far beyond simple word counts, as it involves the coding of qualitative and quantitative information into pre-defined categories from which patterns in the presentation and reporting of information can be derived (Guthrie and Abeysekera, 2006; Stemler, 2000). For coding the company reports, we performed a mix of emergent and a priori coding.

Emergent coding means that the applied categories are established from the data itself through preliminary examination (Stemler, 2000). We used this method for coding the disclosure of the ESG controversies. To first determine which parts of the reports were relevant for our analysis, two of the authors independently read through the news articles regarding the controversies and derived individual keywords for each incident based on the content. The keywords were then discussed by the researchers and updated to ensure a consistent search strategy. To avoid overlooking any information on the controversies in the reports, we chose the keywords as broadly as possible, meaning that we not only took the words from the description in the news articles, but also conducted an extensive search for any potential synonyms of these keywords. In addition, if we were not able to find any fitting information with our keywords, we examined in detail those sections of the reports in which one could expect the description of the controversies thematically. Since content analysis can be broken down by words, sentences, paragraphs or pages (Weber, 1985), we initially planned to use paragraphs as analytical units for our analysis because the information content of a description can be derived from a paragraph rather than a single word or a sentence. However, after investigating a few reports, it became obvious that some controversies were reported in a rather short form. Therefore, we used paragraphs and, where necessary, single sentences as analytical units. Applying these steps allowed the two researchers to identify those text passages in the reports that contained the ESG controversy reporting. No deviations occurred in this identification process.

An in-depth analysis of the first quarter of the selected text passages enabled us to create an objective categorization for the content of the ESG controversy disclosures. As we are primarily interested in assessing the comprehensiveness and completeness of the reporting, we defined

four categories related to the informational content of the disclosure, which we derived from the different variations of ESG controversy reporting in the various reports. The concrete categorization can be found in Table D-2. After establishing the categorization, both researchers independently analysed the remaining texts. Each description was placed into one of the categories previously identified according to its informational content. Differing assessments by the two coders were discussed on a case-by-case basis, but only appeared in two cases, which led us to an interrater agreement of 98.9 %.

After coding the ESG controversy disclosure, we used the a priori coding method to further analyse and code the reports in which the controversies appeared (or should have appeared), with a focus on the overall quality of the report. A priori coding means that the specified categories are already established prior to the analysis based upon a theoretical framework (Stemler, 2000; Weber, 1990). In line with our research questions, we thus defined the categories 'Reporting medium', 'Reporting guidelines and standards' as well as 'External assurance' (see Table D-2), as these attributes are commonly associated with the quality and transparency of sustainability reporting (Global Reporting Initiative, 2021; Hammond and Miles, 2004) and, moreover, are frequently used as categories in studies that conduct content analyses to assess the credibility and quality of CSR/ESG/sustainability reports (e.g. Gao, 2011; Lock and Seele, 2016; Metaxas and Tsavdaridou, 2013; Pistoni et al., 2018). Again, two of the researchers analysed and coded the reports independently and discussed any cases where a coder had doubts, which occurred in less than 8% of instances.

Table D-2: Categorization for the content analysis

Category	Subcategory	Description
Controversy Reporting	Not reported	The controversy is not mentioned in the report.
	Passing reference	The controversy is only mentioned in passing without giving detailed and useful information on the incident.
	Brief statement	The report contains a brief description of the controversy, but there is no information on its impact (no quantitative information).
	Systematic statement	The report contains a systematic and detailed description of the controversy with quantitative information on its impact.
Reporting medium	CSR/ESG/ Sustainability report	In addition to the annual report, the company issues a stand-alone CSR/ESG/sustainability report.
	Annual report with integrated ESG part	Within the annual report, the company reports on CSR/ESG/sustainability topics in its own section.
	Annual report	The company only issues an annual report.
	GRI Standards	GRI guidelines are applied in the company report.

Category	Subcategory	Description
Reporting guidelines & standards	Other CSR/ ESG Reporting guidelines	Other CSR/ESG/sustainability guidelines are applied in the report, e.g. SASB (Sustainability Accounting Standards Board), UNGC (United Nations Global Compact), OECD Guidelines for Multinational Enterprises
External assurance	-	A third party audits the CSR/ESG/sustainability report or section.

With regard to the reliability of our content analysis, we ensured replicability and stability through a multi-coder analysis of the selected data as well as through detailed documentation of the entire research process (Guthrie and Abeysekera, 2006; Hahn and Lülfs, 2014; Milne and Adler, 1999).

D.4 Findings

D.4.1 Overview and characterisation of the analysed controversies

Our sample comprises a total of 190 controversies that occurred in 16 companies from the pharmaceutical and textile industry over a three-year period ranging from 2018-2020. As can be seen from Figure D-1, the vast majority of controversies (90%) are related to social issues. These include multiple topics, like child labour, wages working condition, responsible marketing, business ethics as well as employee and customer health & safety. In contrast, environmental (2%) and governance controversies (8%) appeared much less frequently. Thematically, the environmental sphere comprises all controversies with regard to the environmental impact of the company's operations on natural resources or local communities, while the governance sphere contains insider dealings, management compensation, shareholder rights and accounting scandals. Focussing on the distribution of controversies, the strong imbalance between the three categories is striking. Even though the social category unites a wider range of different topics under itself, this does not explain the under-proportionate occurrence of environmental controversies. Especially against the backdrop that both the textile and the pharmaceutical sector have environmentally intensive supply chains that are frequently criticized by ecologists for their destructive impacts on nature (Jena et al., 2019; Madhav et al., 2018; Pal and Gander, 2018; Wilkinson et al., 2022), the absolute total of only four environmental controversies seems very low for a three year observation of 16 companies, particularly in comparison to 170 social controversies over the same time span. While it would be nice to think that this low number is due to corporate efforts to limit their negative environmental impacts, we believe it is more likely due to the general challenges in clearly proving environmental controversies. Our selected companies are all located either in Europe,

the U.S. or Israel and belong to the biggest firms of their industry with high market capitalisation and large supply chains (see e.g. Bayer, 2020, p. 63, Superdry, 2020, pp. 61). Often, these companies outsource the relatively environmentally intense manufacturing process, or parts of it, to suppliers in emerging countries (Centobelli et al., 2022; Veleva et al., 2018), who then cause the environmental offence, which cannot be attributed to the company itself, leading to lower counts of environmental controversies. Furthermore, the low number of controversies in this vein, especially compared to social controversies, may also be partly explained by the fact that it is generally easier to go public or even file a lawsuit for social offences than it is for environmental wrongdoings. In the case of social controversies, employees or consumers are directly affected and can usually prove the offence on the basis of solid evidence, which, moreover, can be clearly attributed to the respective company. In terms of environmental damages, this procedure is much more difficult: First of all, the damage must be discovered. Since people are often not directly affected by environmental impacts – but indirectly through the air, water, soil, etc. – it takes longer until the negative offence is perceived. This is especially true for developing countries where the general environmental-related laws and inspections are very lax (Hipólito Leal et al., 2021). After the detection of an environmental pollution, the incident must be clearly traceable to the company, which is also difficult given that tangible evidence can often only be obtained by gaining access to the premises. All in all, this leads to the circumstance that environmental controversies are less likely to be detected and assigned to a specific company than social controversies.

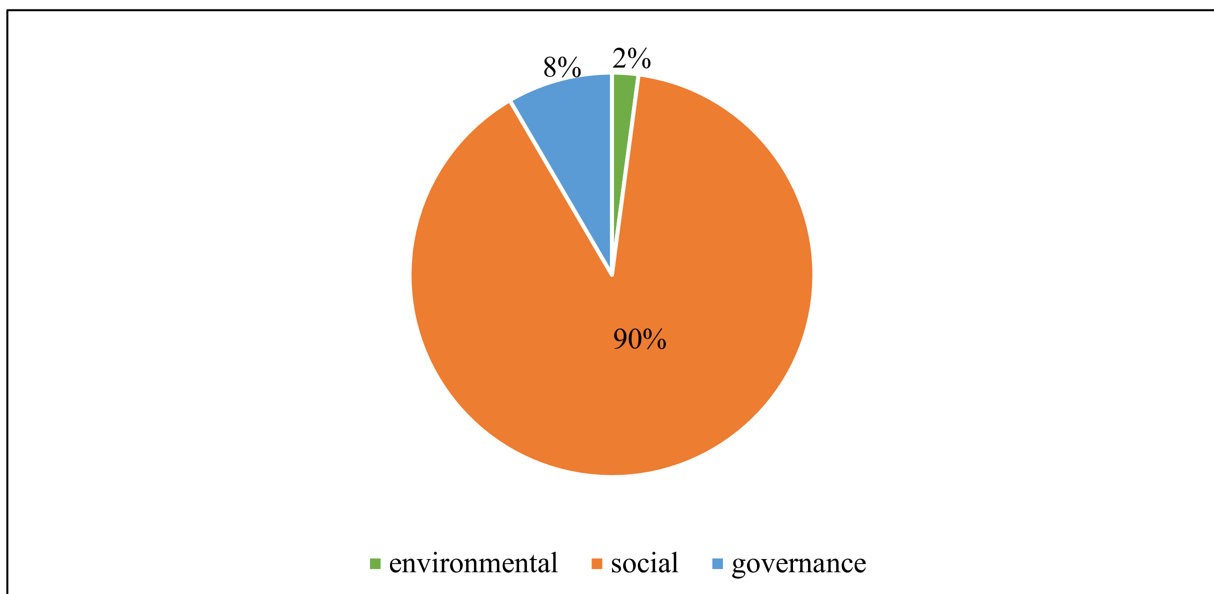

Figure D-1: Thematic distribution of analysed controversies

A closer look at the distribution of controversies per industry and year, as shown in Table D-3, reveals that most of the controversies stem from the pharmaceutical sector. A total of 163 controversies (86%) can be assigned to pharma companies, while textile companies are responsible for 27 incidents (14%). The overall presentations that follow in the later chapters are thus always strongly driven by the results of the pharmaceutical industry. Regarding the thematic distribution, the two sectors differ clearly from each other. While in both industries controversies related to social issues are prevalent, the proportion is significantly higher in the pharmaceutical industry, with an average of 93%, than in the textile industry, with an average of 70%. Even though the high number of incidents in the pharma sector is generally due to multiple different offences, a high influence can be seen from incidents related to the opioid crisis in the U.S. The textile's social controversies, on the other hand, can mainly be traced back to tax fraud and anti-competition practices. In terms of the other controversies, the pharma sector has on average 2% environmental controversies and 5% governance controversies, whereas the textile industry has no environmental controversies and an average of 30% governance controversies. Interestingly, while the relative number of social controversies among pharmaceutical companies is decreasing over the years and that of governance controversies is increasing, this trend is exactly the opposite in the textile industry, i.e. the relative number of social controversies is increasing while that of governance controversies is decreasing. Overall, there is no decreasing trend in controversy occurrence over the three years, which would be desirable. Instead, 2019 is the year with the most controversies for both sectors, albeit with only modest deviations from 2018 and 2020.

Table D-3: Controversies by industry and year

	Pharmaceutical			**Textile**		
	2018	**2019**	**2020**	**2018**	**2019**	**2020**
Environmental controversies	2 (4%)	2 (3%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Social controversies	49 (96%)	65 (94%)	37 (86%)	5 (63%)	7 (70%)	7 (78%)
Governance controversies	0 (0%)	2 (3%)	6 (14%)	3 (37%)	3 (30%)	2 (22%)
Total	51	69	43	8	10	9

D.4.2 In-depth analysis of the reporting practice and transparency of ESG controversies

D.4.2.1 Favoured reporting medium for disclosing ESG controversies

Our first research question tackles the issue in which reporting medium ESG controversies are generally disclosed. Figure D-2 provides an overview of the corresponding reporting practice for the whole sample, in which we distinguish between not at all reported, reported in a stand-alone sustainability report, reported in an integrated report (this category comprises both reports explicitly prepared in accordance with the IR framework as well as all other annual reports with sustainability sections) and reported in the annual report even though the company also publishes a sustainability report.

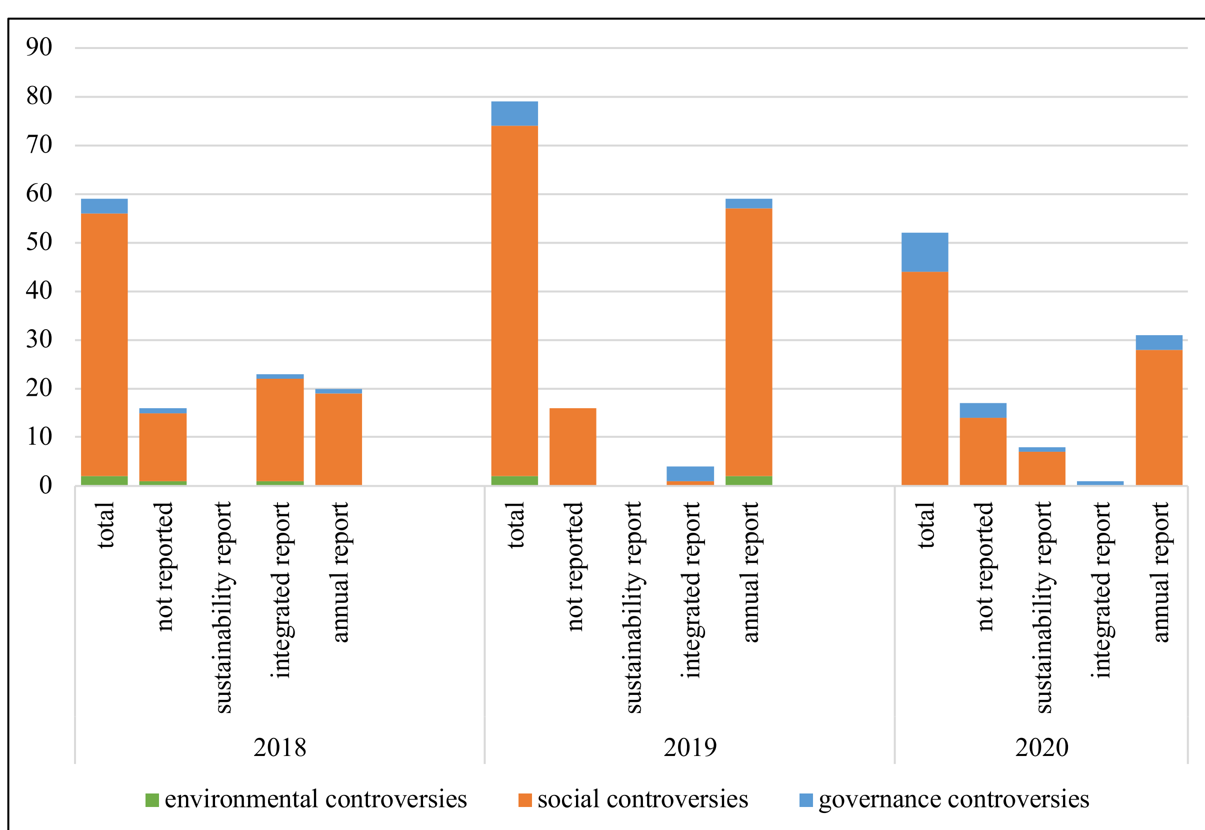

Figure D-2: Favoured reporting medium for disclosing ESG controversies – whole sample

A closer look at the charts reveals that over the three years of investigation a total of 49 (26%) ESG controversies were not reported at all. With regard to the disclosed incidents, a clear tendency towards solely reporting in the annual report can be seen. In fact, 75% of the disclosed controversies were addressed in the annual report, while only 5% were reported in the sustainability report. This is very interesting, as each company that disclosed in the annual report had the chance to additionally disclose the controversy in their stand-alone sustainability

report, where the disclosure would be thematically important to provide a full picture of the ESG situation. The high difference between 75% and 5% therefore shows that firms are obviously trying to keep their sustainability reports free of scandals. Given that the controversies were often already accompanied by corresponding court proceedings or these could be expected in the near future, the reporting within the annual report usually has been made under the section 'legal proceedings'. This reporting practice was also true for the controversies that were disclosed in integrated reports. All of them were reported under 'legal proceedings' and not in the sustainability section. Companies are required by accounting standards to disclose any pending litigation in their annual report if they believe it will have a material effect on their financial results. The motivation for disclosing ESG controversies can therefore be seen as the legal obligation to provide a true and fair view of the company's financial situation rather than as the effort to provide stakeholders' with a full overview of its ESG performance. Interesting in this vein, is the fact that, while the controversies are usually solely disclosed in the annual report, where they need to be disclosed, positive achievements in the ESG context are generally disclosed in both the annual reports as well as in the sustainability reports.

The individual examination of the results per year reveals that the reporting practice changed over the three-year period. While the amount of not reported controversies only varies slightly from 16 incidents in 2018 (27%) and 2019 (20%) to 17 incidents in 2020 (33%), the number of disclosed controversies in integrated reports drops significantly from 23 (39%) in 2018 to 4 (5%) in 2019 and only 1 (2%) in 2020. This development is not due to the fact that the quality of reporting in the integrated reports is declining in any way, but is rather rooted in the circumstance that there seems to be a trend away from publishing one integrated report and towards the publication of separate stand-alone sustainability reports in addition to the annual report. In fact, ten (five pharmaceutical and five textile companies) of the 16 firms whose controversies were studied issued an integrated report in 2018, compared to only six companies (one pharmaceutical and five textile companies) in 2020. This trend has also been found in other studies (e.g. Manes-Rossi et al., 2018; Nilipour et al., 2020).

However, even more striking in the annual outline is that the disclosure of controversies in sustainability reports only started in 2020. In 2018 and 2019, no controversies were reported in stand-alone sustainability reports. In order to better assess this development and to determine whether this may be regarded as a slowly emerging positive trend due to the increased awareness of companies or whether this rather depends on the respective issue and severity of the controversy itself, we took a closer look at the relevant cases. In total, eight controversies

(5%) were disclosed in sustainability reports, of which six occurred in the pharmaceutical sector and two in the textile sector. Regarding the pharma controversies, all six incidents happened in different companies, but they were all related to the opioid epidemic in the USA. The opioid crisis is likely the most profound public health crisis in the U.S. and Canada and has already caused hundreds of thousands of deaths (Vadivelu et al., 2018). Much of the research on the roots of the crises focuses on pharmaceutical misconduct and unethical marketing practices (Friedman et al., 2020). And, indeed, several big pharmaceutical companies have already been sued for their aggressive marketing and failure to adequately warn of the dangers of addiction on drug packaging and in promotional activities (Haffajee and Mello, 2017). Consequently, there is a lot of attention and pressure on pharmaceutical companies to take responsibility and promote solutions to the crisis, e.g. by financially supporting addiction prevention and addiction centres. Against this background, it seems that the comparably progressive reporting within the sustainability reports in these cases is mainly rooted in the high external pressure associated with the topic and not necessarily an effort to provide a comprehensive picture of the ESG situation. It represents companies' attempts to demonstrate that they are fulfilling their responsibility in order to retain their stakeholders' trust. This impression is further reinforced by the fact that the respective firms were all involved in several further – less widely discussed, but no less serious – controversies in 2020, none of which were reported within their sustainability reports.

With regard to the textile controversies, the two incidents disclosed in a sustainability report were both caused by the same company. The first controversy stems from the category 'wages & working conditions' and concerns the wages of Southeast Asian factory workers. The second controversy is related to the suspicion of directly employing or sourcing from suppliers that use Uyghur forced laborers in Xinjiang and thus represents a human rights controversy. Any form of human rights violations, which also include wages below the minimum wage, are usually the subject of intense media coverage and attract a lot of attention, especially in cases where multinational enterprises are involved (Peksen et al., 2014; Zerk, 2006). Accused companies therefore tend to react very quickly and either explain themselves or deny the blame in order to protect their reputation, as stakeholders react very sensitively to such news (Nardella et al., 2022; Schrempf-Stirling and Wettstein, 2017). Thus, just as it was the case in the pharmaceutical industry, the high level of attention on the topic and the associated external pressure seem to have had a high influence on the disclosure in the sustainability report. Given that the company was not subject to other controversies within the year 2020, we cannot directly compare how they handled thematically different controversies. However, none of their

controversies from the years 2018 and 2019 were disclosed in the respective sustainability reports. Interestingly, these two incidents were the only controversies related to human rights violations in the whole sample. Taken together, we can therefore see the trend that only the most explosive controversies (in this sample human rights and opioid crisis controversies) are reported within the sustainability reports, while the less attention-seeking offences are either not reported at all or, if legal proceedings are expected or pending, are reported in the annual report.

A closer look at the different industries, presented in Figure D-3 and Figure D-4, shows that the findings described above are true for both industries. However, the separate illustration shows very clearly that the trend away from integrated reports is especially true for the pharmaceutical companies.

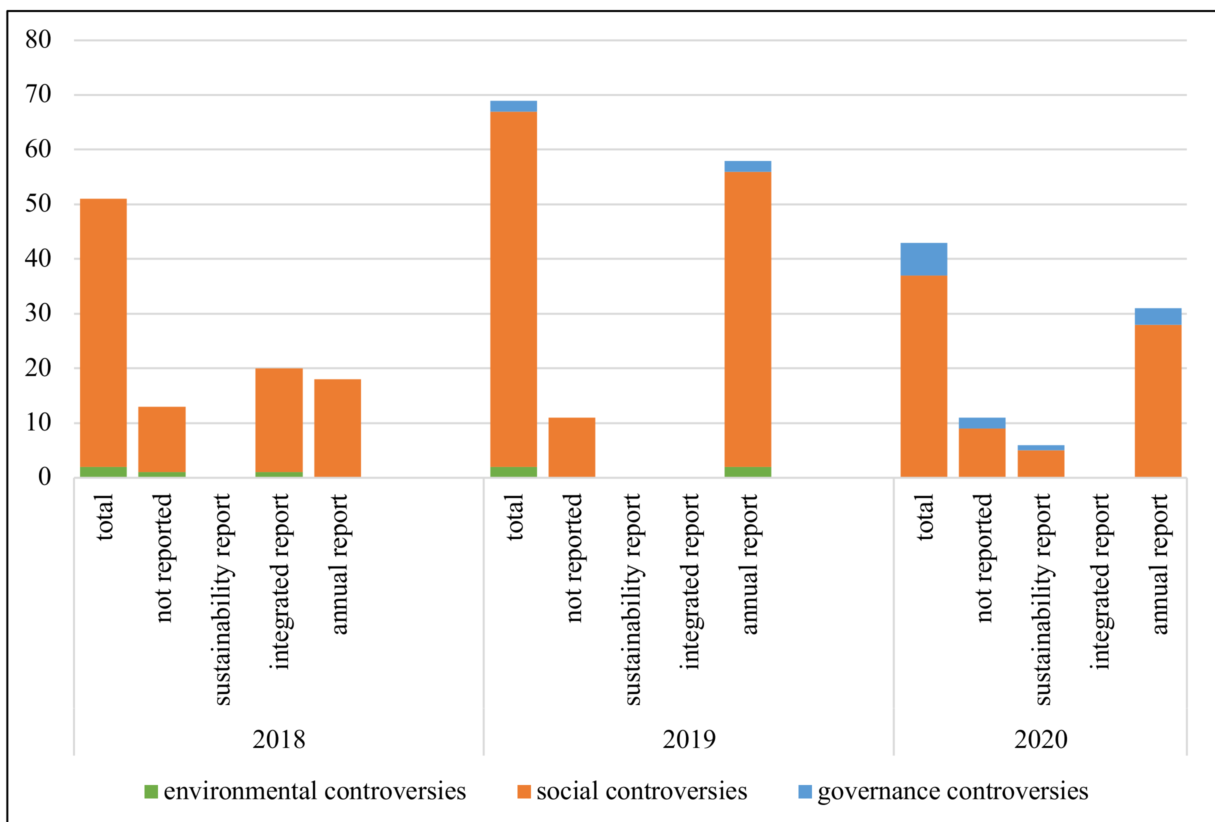

Figure D-3: Favoured reporting medium for disclosing ESG controversies – pharmaceutical

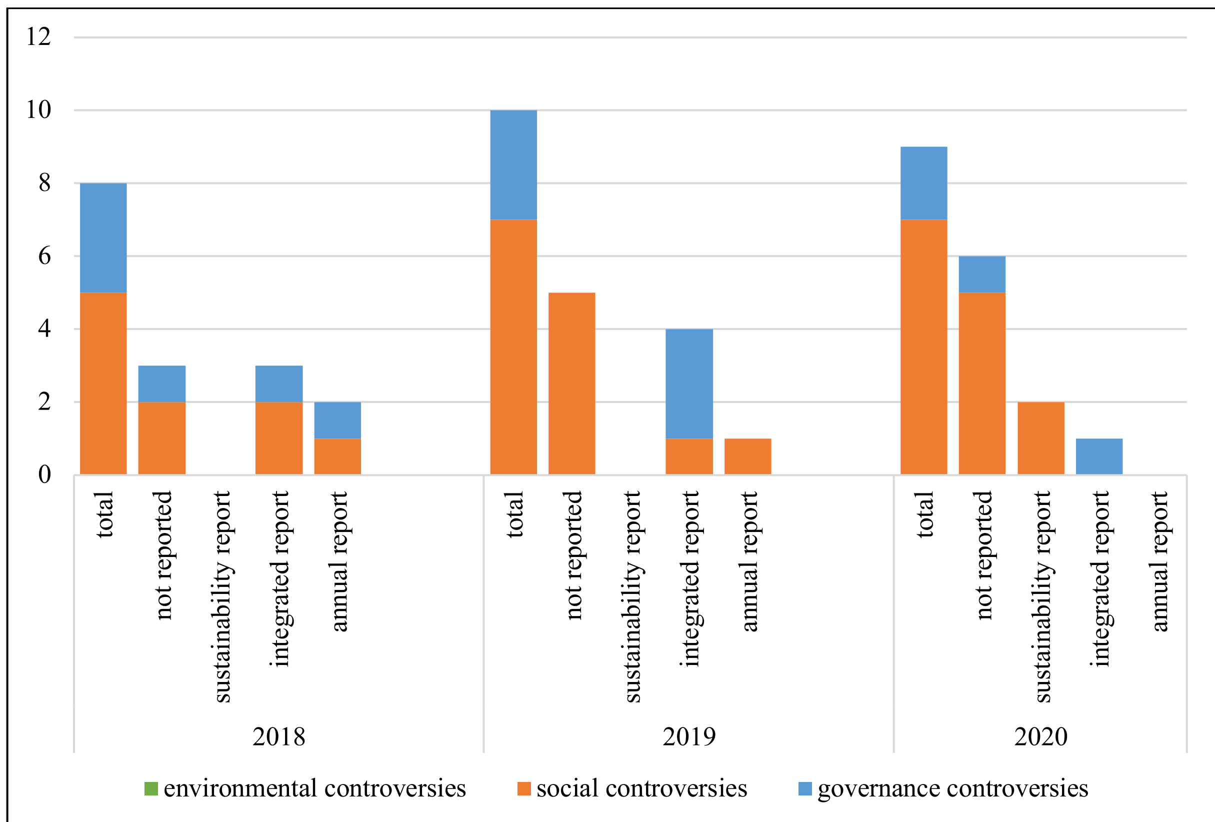

Figure D-4: Favoured reporting medium for disclosing ESG controversies – textile

Summing up, the examination of the chosen reporting medium as well as the exact location for disclosing ESG controversies revealed that companies from the textile and pharmaceutical industries try to keep their sustainability reports and sustainability sections within integrated reports clean from negative news by proceeding as follows:

- ESG controversies with expected or pending litigations are disclosed in the annual report under the section ‘Legal Proceedings’.
- Only explosive ESG controversies that concern very sensitive issues and are therefore associated with ongoing media attention and high pressure from stakeholders are reported in the sustainability report.
- All other ESG controversies are not reported at all, even if they have been uncovered by third parties and published in the media.

D.4.2.2 Quality of ESG controversy disclosure

Our second research question concerns the quality and informational content of ESG controversy disclosure. More specifically, we want to analyse the level of detail in the reporting and determine whether this is dependent on the nature of the controversy. As already described in Section 3, we use the four categories ‘not reported’, ‘passing reference’, ‘brief statement’ and ‘systematic statement’ to evaluate the informational quality of the controversy reporting. We analyse the disclosure quality along the three main pillars – environmental, social and governance – as well as the subcategories of each sphere. Given the abundance of different issues within the social sphere, we used the four superordinate categories of Refinitiv into which the social controversies are assigned. The results for the whole sample are presented in Table D-4. As previously mentioned, 26% (49) of the controversies that occurred throughout the whole time span were not reported at all. Interestingly, this ratio stays stable for all three main categories. With regard to the reported incidents, the analysis shows that most of the controversies, namely 35% (67), were briefly stated, meaning that the disclosure contained a description of the controversy, but no quantitative information on its impact. In contrast, 14% (27) of controversies were disclosed as a passing mention without sufficient information and 25% (47) were systematically stated with a detailed description and quantitative information regarding their impact. In order to provide a more detailed analysis and get a deeper insight into the disclosure quality, we go on to the separate analysis of the pharmaceutical and textile industry, as both branches differ strongly in their results.

Table D-4: Quality of ESG controversy disclosure – whole sample

	2018					2019					2020					Total				
	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement
Environmental	**2 100%**	**1 50%**	**1 50%**	**0 0%**	**0 0%**	**2 100%**	**0 0%**	**0 0%**	**2 100%**	**0 0%**	**0 0%**	**0 0%**	**0 0%**	**0 0%**	**0 0%**	**4 100%**	**1 25%**	**1 25%**	**2 50%**	**0 0%**
Social	**54 100%**	**14 26%**	**9 17%**	**23 43%**	**8 15%**	**72 100%**	**16 22%**	**7 10%**	**28 39%**	**21 29%**	**44 100%**	**14 32%**	**5 11%**	**8 18%**	**17 39%**	**170 100%**	**44 26%**	**21 12%**	**59 35%**	**46 27%**
Community	32 100%	13 41%	3 9%	13 41%	3 9%	29 100%	6 21%	3 10%	13 45%	7 24%	27 100%	10 37%	4 15%	6 22%	7 26%	88 100%	29 33%	10 11%	32 36%	17 19%
Human Rights	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%
Product responsibility	22 100%	1 5%	6 27%	10 45%	5 23%	42 100%	9 21%	4 10%	15 36%	14 33%	14 100%	4 29%	1 7%	0 0%	9 64%	78 100%	14 18%	11 14%	25 32%	28 36%
Workforce	0 0%	0 0%	0 0%	0 0%	0 0%	1 100%	1 100%	0 0%	0 0%	0 0%	2 100%	0 0%	0 0%	1 50%	1 50%	3 100%	1 33%	0 0%	1 33%	1 33%
Governance	**3 100%**	**1 33%**	**0 0%**	**2 67%**	**0 0%**	**5 100%**	**0 0%**	**2 40%**	**3 60%**	**0 0%**	**8 100%**	**3 38%**	**3 38%**	**1 13%**	**1 13%**	**16 100%**	**4 25%**	**5 31%**	**6 38%**	**1 6%**
Shareholders	1 100%	0 0%	0 0%	1 100%	0 0%	5 100%	0 0%	2 40%	3 60%	0 0%	7 100%	3 43%	2 29%	1 14%	1 14%	13 100%	3 23%	4 31%	5 38%	1 8%
Management	2 100%	1 50%	0 0%	1 50%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	3 100%	1 33%	1 33%	1 33%	0 0%
Total	**59 100%**	**16 27%**	**10 17%**	**25 42%**	**8 14%**	**79 100%**	**16 20%**	**9 11%**	**33 42%**	**21 27%**	**52 100%**	**17 33%**	**8 15%**	**9 17%**	**18 35%**	**190 100%**	**49 26%**	**27 14%**	**67 35%**	**47 25%**

Table D-5 shows the results of the pharmaceutical industry. Overall, 21% (35) of the controversies were not reported, while 16% (26) were passingly mentioned, 35% (57) were briefly described and 28% (45) were systematically disclosed. A closer look at the different categories reveals that the disclosure quality differs noticeably between the three ESG spheres. Especially interesting in this vein is the comparison between the social and governance area. While the disclosure quality of the social controversies is comparably high, with a total of 65% (98) being either systematically (29% or 44) or at least briefly (36% or 54) reported, this proportion is significantly lower for governance controversies, with only 26% (13% or 1 systematic and 13% or 1 brief statement). In line with this, the proportion of inadequately reported controversies in the governance category is higher than in the social category, with 50% (4) being passingly referenced compared to 14% (21). Of course, it must be taken into account that the number of social controversies (151 incidents) is generally much higher than of governance controversies (only 8 incidents). Nevertheless, we compare the relative values and it seems that more importance is attributed to the disclosure of social controversies.

A deeper look at the social subcategories shows that the caused incidents stem from the categories of work force, product responsibility and community. The most sensitive and attention-seeking topic in this list is certainly work force as it covers issues like ‘wages & working condition’ and ‘employee health & safety’. Accordingly, the disclosure of the only controversy in this subcategory was informative and fully comprehensive. With regard to the ‘product responsibility’ and ‘community controversies’, the overall disclosure quality is relatively similar, with 69% and 60% of incidents reported briefly and systematically, respectively. However, the disclosures from the ‘product responsibility’ section have a higher level of detail, with 37% being systematically reported compared to 20% in the ‘community’ section. Product responsibility comprises issues like customer health & safety, product quality and responsible R&D. These topics can play a decisive role for pharma companies as their products are designed to cure, treat or prevent diseases and any controversies associated with low product quality could lead to severe problems with customer trust, drops in sale, reputation damages and, most importantly, actual health risks for customers. The higher detail in reporting compared to the community category, which entails incidents related to anti-competition, business ethics, tax fraud, etc., may therefore be explained by the higher importance of the topics. Overall, however, the controversies from the whole social category have a higher damage potential than those from the governance category, which reflects in the higher reporting quality. Nevertheless, it is surprising that controversies related to shareholders, such as insider dealings, accounting scandals and shareholder rights, were rather insufficiently

reported, with 43% being just passingly referenced and 29% being not reported at all. As all companies in our sample are listed companies that are dependent on their shareholders, we expected a more sophisticated disclosure.

The environmental category is characterised by only four controversies. Two of these (50%) were disclosed as a brief statement, while one was passingly mentioned and the last was not reported. Given the damaging power of environmental scandals due to stakeholders' sensitivity towards such issues, we also expected a higher quality reporting here.

Overall, the proportion of systematically reported controversies continuously increased over the observation period in the pharmaceutical industry, from 14% in 2018, to 29% in 2019 and 42% in 2020. However, in view of the still high number of unreported and passingly referenced incidents, it is not possible to speak of a general improvement in disclosure quality.

Table D-5: Quality of ESG controversy disclosure – pharmaceutical

	2018					2019					2020					Total				
	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement
Environmental	**2**	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**1**	**1**	**2**	**0**
	100%	**50%**	**50%**	**0%**	**0%**	**100%**	**0%**	**0%**	**100%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**100%**	**25%**	**25%**	**50%**	**0%**
Social	**49**	**12**	**9**	**21**	**7**	**65**	**11**	**7**	**27**	**20**	**37**	**9**	**5**	**6**	**17**	**151**	**32**	**21**	**54**	**44**
	100%	**24%**	**18%**	**43%**	**14%**	**100%**	**17%**	**11%**	**42%**	**31%**	**100%**	**24%**	**14%**	**16%**	**46%**	**100%**	**21%**	**14%**	**36%**	**29%**
Community	28	11	3	12	2	25	4	3	12	6	22	5	4	6	7	75	20	10	30	15
	100%	39%	11%	43%	7%	100%	16%	12%	48%	24%	100%	23%	18%	27%	32%	100%	27%	13%	40%	20%
Human rights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Product responsibility	21	1	6	9	5	40	7	4	15	14	14	4	1	0	9	75	12	11	24	28
	100%	5%	29%	43%	24%	100%	18%	10%	38%	35%	100%	29%	7%	0%	64%	100%	16%	15%	32%	37%
Work Force	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	100%	100%	0%	0%	0%	100%
Governance	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**1**	**0**	**6**	**2**	**3**	**0**	**1**	**8**	**2**	**4**	**1**	**1**
	0%	**0%**	**0%**	**0%**	**0%**	**100%**	**0%**	**50%**	**50%**	**0%**	**100%**	**33%**	**50%**	**0%**	**17%**	**100%**	**25%**	**50%**	**13%**	**13%**
Shareholders	0	0	0	0	0	2	0	1	1	0	5	2	2	0	1	7	2	3	1	1
	0%	0%	0%	0%	0%	100%	0%	50%	50%	0%	100%	40%	40%	0%	20%	100%	29%	43%	14%	14%
Management	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%	100%	0%	0%
Total	**51**	**13**	**10**	**21**	**7**	**69**	**11**	**8**	**30**	**20**	**43**	**11**	**8**	**6**	**18**	**163**	**35**	**26**	**57**	**45**
	100%	**25%**	**20%**	**41%**	**14%**	**100%**	**16%**	**12%**	**43%**	**29%**	**100%**	**26%**	**19%**	**14%**	**42%**	**100%**	**21%**	**16%**	**35%**	**28%**

Table D-6 presents the results of the textile industry. Overall, the disclosure quality of the controversies is much weaker in this branch, with a total of 52% (14) not being reported, 4% (1) passingly mentioned, 37% (10) briefly described and only 7% (2) systematically disclosed. The examination of the individual ESG categories shows that, unlike the results of the pharmaceutical sector, the governance controversies have a higher reporting quality than those of the social sphere. Indeed, the results are the exact opposite of the pharma industry, as the social sub-categories 'community' and 'product responsibility' have the highest not reported controversy proportions with 69% (9) and 67% (2). In the governance category, on the other hand, 67% (4) of controversies related to shareholders and 50% (1) related to management departures were briefly disclosed. The strikingly better disclosure quality in this vein is explainable by the fact that the respective controversies were comparably severe. More precisely, the reported shareholder controversies were incidents of profit shifting, which were heavily and long discussed in the media, while the management controversy was related to sexual harassment, which, of course, also received high media attention. The respective firms were therefore strongly expected to provide information within their company reports. The only two controversies that were systematically reported were both associated with tax fraud and had been very present in the media beforehand.

In addition to the general lower disclosure quality, a significant deterioration in controversy reporting is observable over time for the textile industry. While 13% of the controversies were still systematically reported and 38% were not reported in 2018, these proportions declined to 10% systematically disclosed and 50% not disclosed in 2019 to 0% systematically reported and 67% not reported in 2020. We cannot derive an obvious reason for this decline, as there were several similar controversies that were still reported in 2018, but not disclosed in 2020.

Table D-6: Quality of ESG controversy disclosure – textile

	2018					2019					2020					Total				
	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement	total	not reported	passing reference	brief statement	systematic statement
Environmental	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**	**0** **0%**
Social	**5** **100%**	**2** **40%**	**0** **0%**	**2** **40%**	**1** **20%**	**7** **100%**	**5** **71%**	**0** **0%**	**1** **14%**	**1** **14%**	**7** **100%**	**5** **71%**	**0** **0%**	**2** **29%**	**0** **0%**	**19** **100%**	**12** **63%**	**0** **0%**	**5** **26%**	**2** **11%**
Community	4 100%	2 50%	0 0%	1 25%	1 25%	4 100%	2 50%	0 0%	1 25%	1 25%	5 100%	5 100%	0 0%	0 0%	0 0%	13 100%	9 69%	0 0%	2 15%	2 15%
Human Rights	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%
Product responsibility	1 100%	0 0%	0 0%	1 100%	0 0%	2 100%	2 100%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	3 100%	2 67%	0 0%	1 33%	0 0%
Workforce	0 0%	0 0%	0 0%	0 0%	0 0%	1 100%	1 100%	0 0%	0 0%	0 0%	1 100%	0 0%	0 0%	1 100%	0 0%	2 100%	1 50%	0 0%	1 50%	0 0%
Governance	**3** **100%**	**1** **33%**	**0** **0%**	**2** **67%**	**0** **0%**	**3** **100%**	**0** **0%**	**1** **33%**	**2** **67%**	**0** **0%**	**2** **100%**	**1** **50%**	**0** **0%**	**1** **50%**	**0** **0%**	**8** **100%**	**2** **25%**	**1** **13%**	**5** **63%**	**0** **0%**
Shareholders	1 100%	0 0%	0 0%	1 100%	0 0%	3 100%	0 0%	1 33%	2 67%	0 0%	2 100%	1 50%	0 0%	1 50%	0 0%	6 100%	1 17%	1 17%	4 67%	0 0%
Management	2 100%	1 50%	0 0%	1 50%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	2 100%	1 50%	0 0%	1 50%	0 0%
Total	**8** **100%**	**3** **38%**	**0** **0%**	**4** **50%**	**1** **13%**	**10** **100%**	**5** **50%**	**1** **10%**	**3** **30%**	**1** **10%**	**9** **100%**	**6** **67%**	**0** **0%**	**3** **33%**	**0** **0%**	**27** **100%**	**14** **52%**	**1** **4%**	**10** **37%**	**2** **7%**

Summing up, our analysis revealed the following insights:

- The overall controversy disclosure quality is considerably higher in the pharmaceutical industry than in the textile industry. In addition, the pharmaceutical industry showed increasing proportions of systematically described incidents over the three-year period, while the textile industry exhibited decreases.
- Pharma companies attribute more importance to the disclosure of social controversies, especially those resulting from work force and product responsibility, than to those from the governance area.
- Textile companies attribute more importance to the disclosure of governance controversies, especially those related to shareholder rights, than to those from the social area.
- Both industries show the highest level of detail in the description of controversies that have been covered in the media for a comparatively long time, although some of them were less severe than other controversies that were reported for a shorter time.

These findings need to be seen in light of the fact that the high majority of controversies were disclosed as expected or ongoing legal proceedings in the annual report and not as classical ESG information within ESG reports/sections.

D.4.2.3 Impact of sustainability reporting standards on ESG controversy disclosure

Our third research question addresses the potential influence of sustainability reporting standards on the disclosure of ESG controversies. Given that such standards provide detailed guidelines on the content of sustainability reports and hereby also explicitly include the disclosure of negative contributions (GRI, 2016; SASB, 2019), their application should have a positive impact on the reporting practice of ESG controversies. However, considering that the recommendations of such reporting standards usually refer exclusively to sustainability reports or respectively sustainability sections within the annual reports, and taking into account that the whole sample comprises only eight controversies that were actually disclosed within sustainability reports/sections, we can already anticipate that the findings will not be very satisfying. Nevertheless, we want to show the corresponding results to provide better insights into the connection between reporting standards and the disclosure of ESG controversies.

In Figure D-5 we present the results for the whole sample. We divided the controversies into three groups – 'not reported', 'reported but not in sustainability report/section' and 'reported in sustainability report/section' – and show for each group the amount of controversies that were

caused by companies that applied the GRI or other sustainability reporting standards as well as the amount of controversies that were caused by companies that did not stick to any guideline. Overall, 91% of controversies in 2018 and 2019 and still 77% in 2020 were not disclosed in sustainability reports/sections, even though the respective firms applied such reporting standards and thus committed to disclosing a balanced picture of their ESG situation. These findings are in line with other critical research results on companies' non-compliance with adopted sustainability standards (e.g. Machado et al., 2021; Talbot and Boiral, 2018) and further highlight the incompleteness of published ESG information. Especially given that even those companies that actually did disclose controversies in their 2020 sustainability reports or sections did so only for the attention-seeking controversies and not for all of their ESG controversies shows that companies are largely using sustainability reporting standards abusively in an as-it-suits-best manner and do not fully adhere to their recommendations.

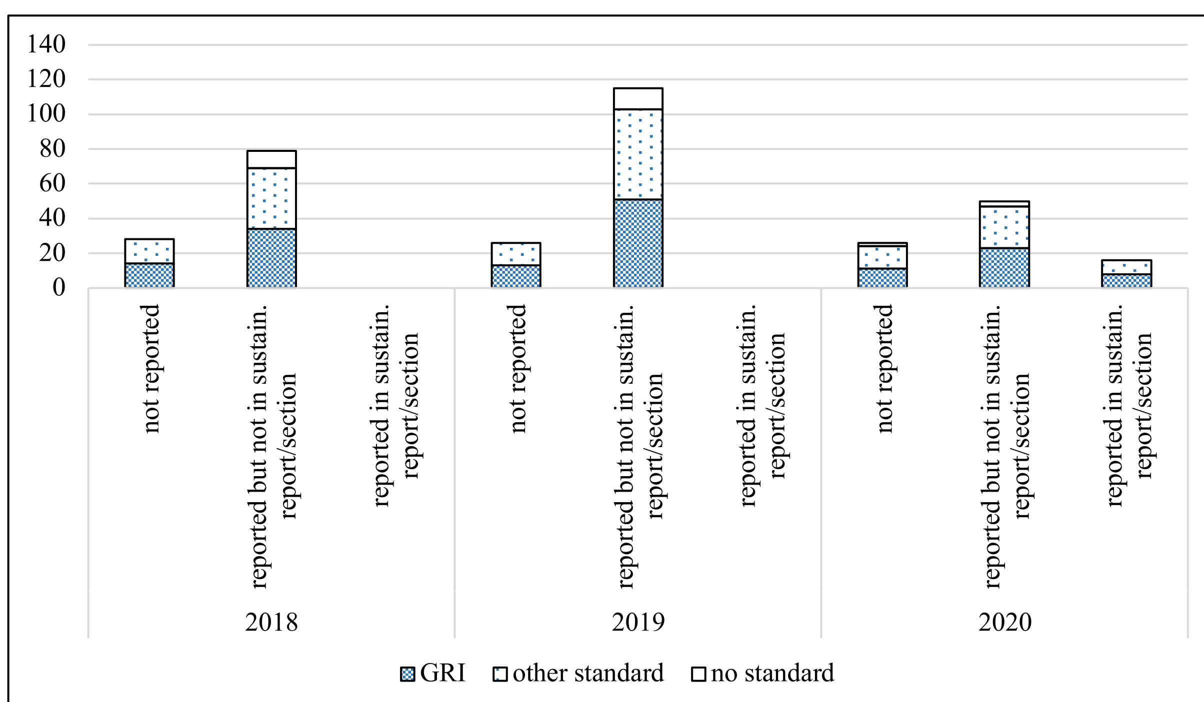

Figure D-5: Impact of sustainability reporting standards on ESG controversy disclosure – whole sample

A closer look at the two industries individually, as presented in Figure D-6 and Figure D-7, reveals that there are no significant differences between the two sectors regarding their disclosure behaviour. Interestingly, both charts as well as the diagram for the whole sample illustrate clearly that the number of companies adopting sustainability standards increased continuously over the three years. Against the background that neither the disclosure likelihood nor the disclosure quality (see D.4.2.2) changed significantly over the same time span, the presumption arises that companies are trying to benefit from the symbolic power of such

standards, e.g. by appearing to be more committed and making efforts towards sustainability and stakeholder information, rather than to actually improve their reporting in terms of ESG controversies.

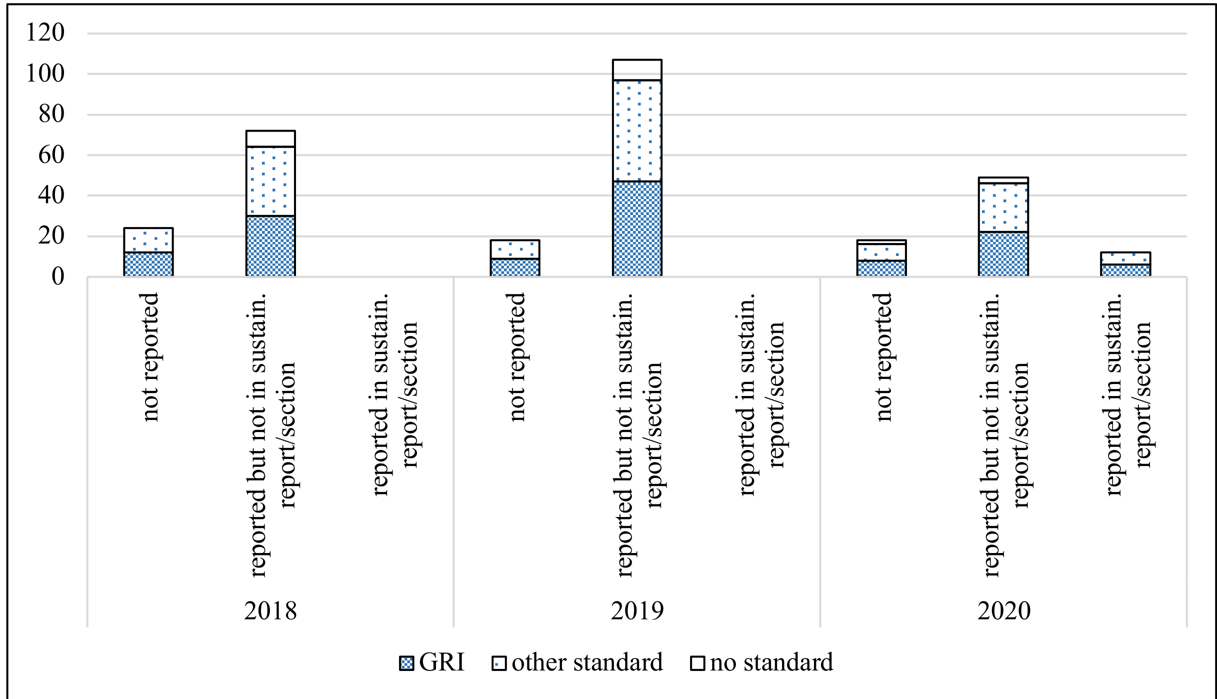

Figure D-6: Impact of sustainability reporting standards on ESG controversy disclosure – pharmaceutical

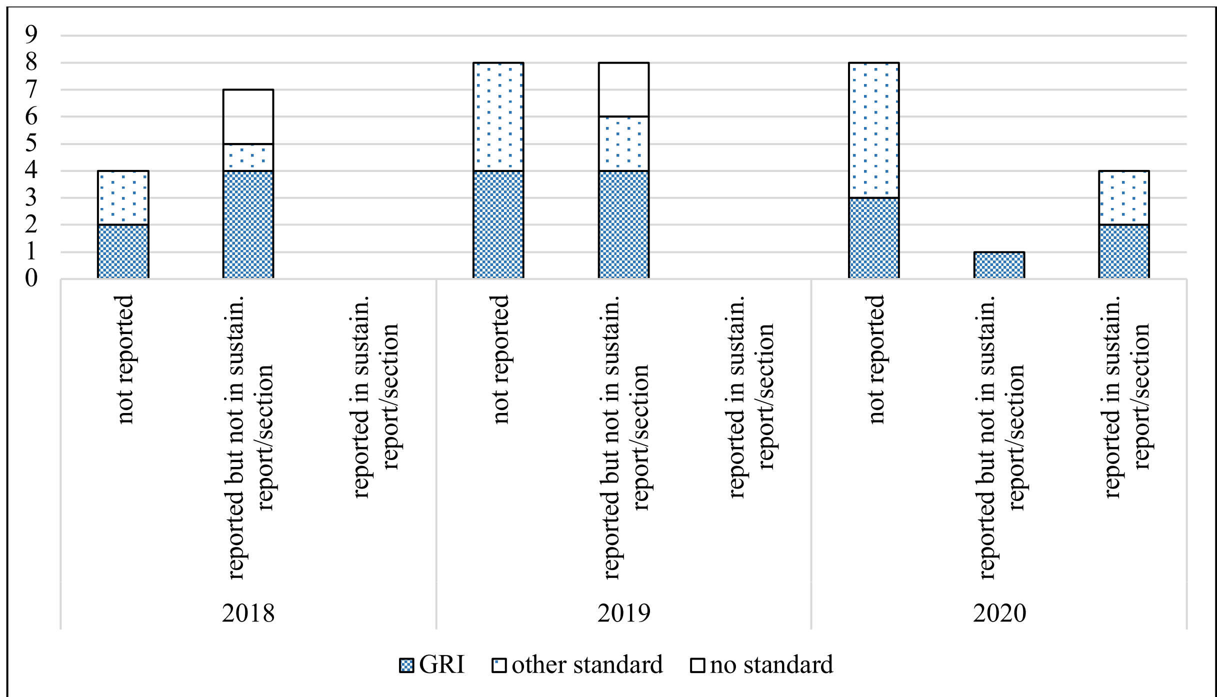

Figure D-7: Impact of sustainability reporting standards on ESG controversy disclosure – textile

Summing up, our results show that even though the number of companies applying sustainability reporting standards is steadily increasing, the adoption does not appear to have a positive impact on the likelihood of ESG controversy disclosure in the pharmaceutical and textile industries. Especially against the background that sustainability reporting standard setters actively request companies to publish positive as well as negative aspects, these are disappointing results.

D.4.2.4 Impact of assurance on ESG controversy disclosure

Our last research question concerns the potential impact of independent assurance on the disclosure of ESG controversies. As already mentioned, companies increasingly use independent third party assurance on their sustainability reports to demonstrate the trustworthiness of their disclosed ESG information (Junior et al., 2014). Given that previous studies indeed found that assured reports are related to a higher report quality (e.g. Ballou et al., 2018; Braam and Peeters, 2018), one could therefore assume that this higher quality is also reflected in a higher probability of disclosing information on ESG controversies.

Similar to the previously described scope of application of sustainability reporting standards, it is also important for this analysis to consider that sustainability assurances usually only cover information disclosed within the sustainability reports or sustainability sections of the annual reports. We therefore use the same classifications to group the respective controversies in our charts. Figure D-8 contains the results for the impact of assurance on ESG controversy reporting for the whole sample. As can be seen from the illustration, the amount of assured sustainability reports constantly increased over the three years. However, even though the majority of sustainability reports/sections were under assurance, this did not lead to a higher disclosure of ESG controversies. Indeed, 49% of controversies in 2018, 77% in 2019 and 67% in 2020 were not disclosed in sustainability reports, although the respective firms had their reports assured. While the circumstance that eight controversies were reported in sustainability reports in 2020, all of which were audited, appears to be a considerable improvement at first glance, we should point out again that the respective firms were involved in further controversial incidents, which were not disclosed within their sustainability reports, hereby significantly diminishing the perceived improvement. The disclosure was thus obviously driven more by the external interest in the issues than by the assurance service itself. All in all, these results fit to the critical perspective on sustainability reporting and support previous research results on the unreliability of the sustainability reporting assurance process (Boiral et al., 2019a; Talbot and Boiral, 2018). Einwiller and Carroll (2020), who also exclusively focused on negative ESG disclosures in their

study, found contradicting results, namely that assurance had a significantly positive influence on the proportion of reported controversies. However, in view of the facts that they solely relied on self-reported controversies of the companies and furthermore explicitly emphasised that the overall proportion of ESG controversies 'was still very low' (Einwiller and Carroll, 2020, p. 329), our findings present an important extension of their study and suggest that their results might be different if externally reported controversies of the respective companies were also included.

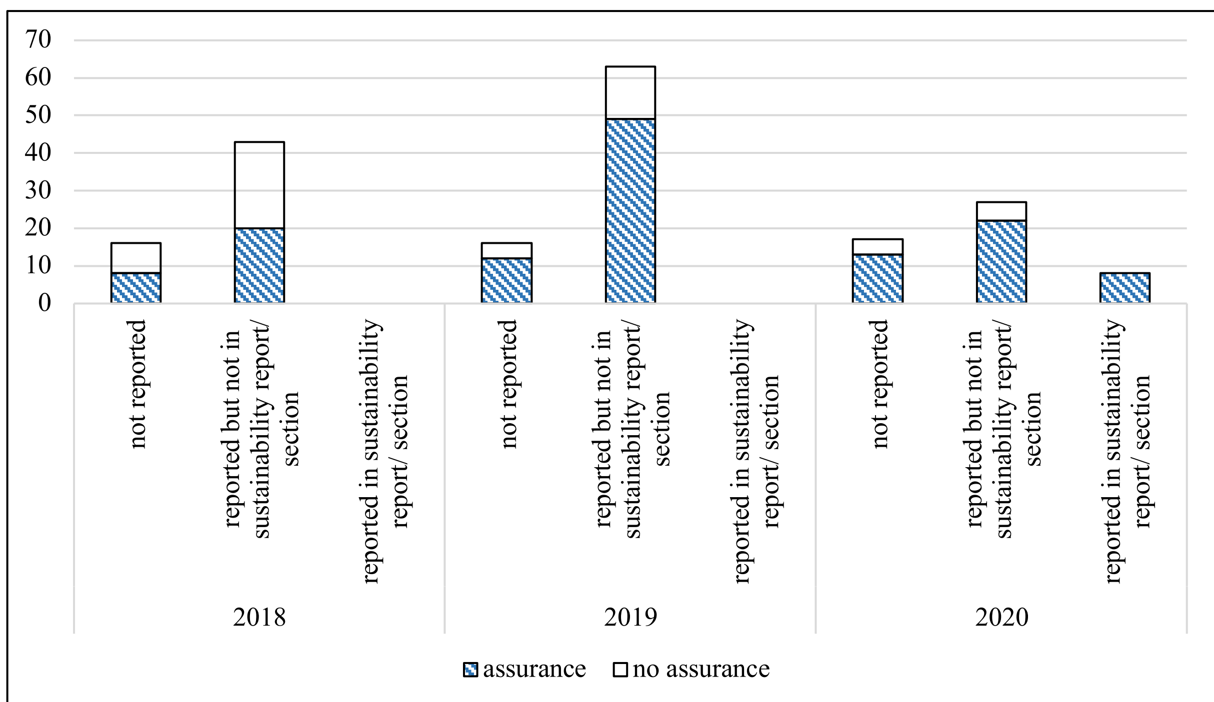

Figure D-8: Impact of assurance on ESG controversy disclosure – whole sample

The separate consideration of the results of the two sectors, presented in Figure D-9 and Figure D-10, reveals that the pharmaceutical industry has a higher amount of assured reports than the textile industries, but this is not associated with a higher disclosure likelihood of ESG controversies.

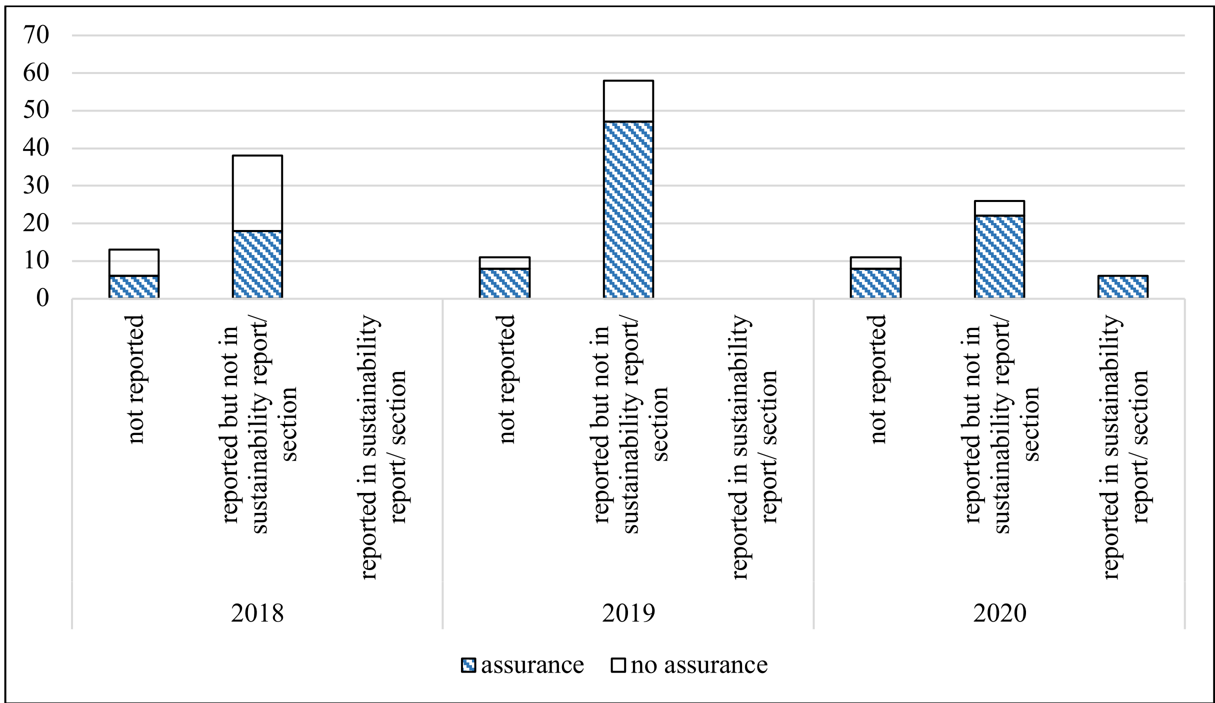

Figure D-9: Impact of assurance on ESG controversy disclosure – pharmaceutical

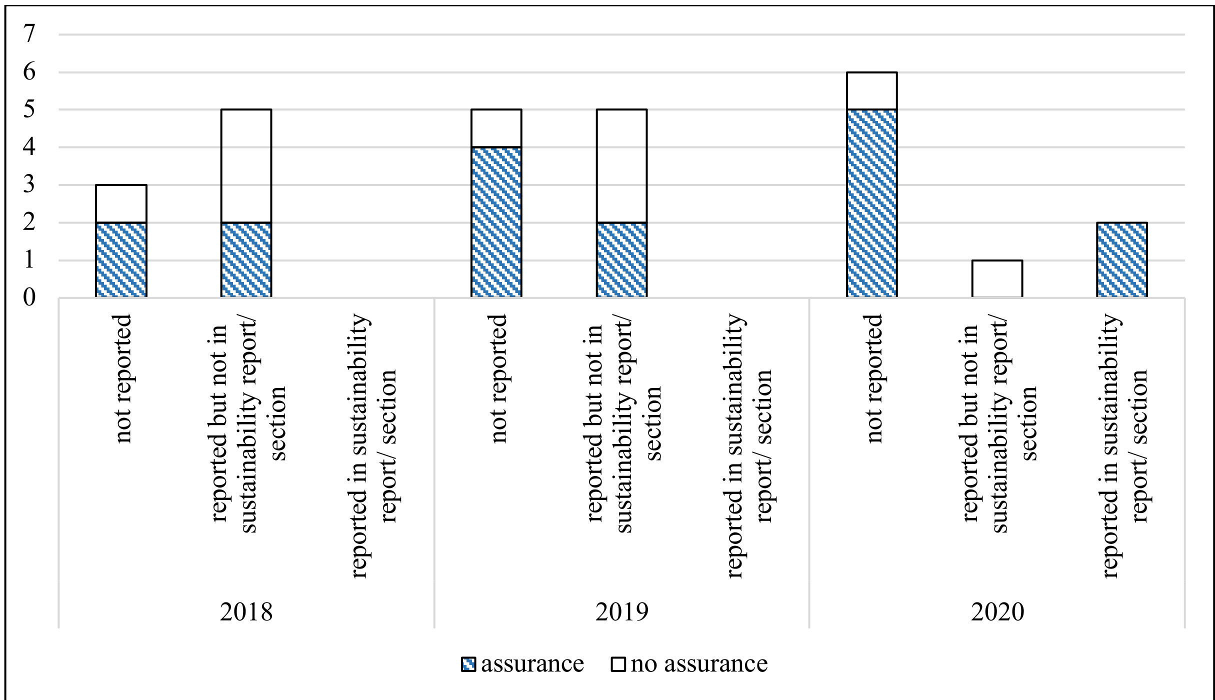

Figure D-10: Impact of assurance on ESG controversy disclosure – whole sample

Summing up, our findings indicate that the engagement of an independent audit does not appear to exert a positive effect on the likelihood of disclosing ESG controversies within the pharmaceutical and textile industries. Instead, it seems that these engagements are primarily

directed towards enhancing companies' legitimacy without really improving the quality of the disclosed information, at least with regard to ESG controversies.

D.5 Discussion and conclusion

D.5.1 Discussion

The aim of the current study is to shed light on the reporting practice of ESG controversies in the textile and pharmaceutical industry. Drawing on a rich body of empirical evidence, we analyse the disclosure of 190 ESG controversies in 104 corporate reports from the pharmaceutical and textile industries for a three-year period ranging from 2018 to 2020 and derive some interesting findings.

First, our analysis demonstrates that companies tend to disclose only those controversies that are either associated with high media attention or are expected to be related to litigation, resulting in about a quarter of controversies not being disclosed at all. Moreover, the controversies with expected litigation were only reported once within the legal proceedings section of the annual report and not again in the sustainability report/section where the disclosure would be thematically important to provide a transparent, true and fair view of the corporate sustainability performance. As a consequence, only controversies that were associated with high and sustained media attention were disclosed in the sustainability reports. This minimal-disclosure behaviour reveals some intriguing insights. Most importantly, it shows that companies only disclose what they are practically forced to disclose, either due to legal obligation from financial reporting (litigations with potentially material impacts) or due to high public attention. Their reporting on failures and shortcomings is not done out of a desire to proactively inform stakeholders or to present a balanced picture of their ESG situation, but rather to save face and avoid harsh backlash that could be expected from concealing information on sensitive issues. Particularly surprising in this context is the fact that all the controversies whose reporting practices were analysed have already been published in the media. Einwiller and Carroll (2020) concluded in their analysis of self-reported controversies that they expect companies to disclose those negative ESG aspects that will inevitably become known, while hiding the ones that are less likely to go public. However, our findings reveal that even within the public controversies a prioritization takes place around which misconduct is disclosed and which is swept under the carpet, resulting in a highly selective and absolutely minimal disclosure of ESG controversies. The circumstance that only the real hot topic controversies were published in sustainability reports/sections further shows that companies try to keep their

sustainability information as clean as possible from negative contributions and thus still use their sustainability reports/sections primarily as marketing tools.

Second, the general quality of disclosure needs improvement, as only a quarter of the controversies were systematically described with sufficient information regarding background and impact of the incident. The fact that it was again the high-attention controversies that were characterized by a sufficient information disclosure, while the majority of the other controversies were just briefly described or even only passingly mentioned, illustrates that the problem of biased reporting occurs not only with regard to positive and negative ESG contributions, but even within the disclosure of negative ESG aspects itself. Apparently, companies are so much driven by the fear of reputation damages, legitimacy harms and other negative consequences that may result from transparent controversy descriptions (Einwiller and Carroll, 2020; Mishra and Modi, 2013) that they pursue a self-laudatory sustainability communication which, ironically, will also foster stakeholder scepticism, declining credibility and reputational losses in the long run. Particularly concerning in vein of the biased reporting is the fact that our sample contained some incidents from the same companies whose topics and severities were similar, but whose level of detail in disclosure varied significantly due to the differences in the associated media attention. This deliberate withholding of comprehensive information regarding less prominent controversies is certainly a strategy to not draw more attention than necessary to these negative contributions, hereby downplaying their importance and seriousness, while still creating the illusion of a balanced ESG picture through their mention. However, it also shows clearly that stakeholders are exposed to an absolutely inadequate information situation as incidents about which they should be informed to the same extent are treated extremely differently. Given that various stakeholders, such as investors, rely on firms' sustainability reports or sections to make informed decisions, such reporting practices could lead to serious problems, including the reinforcement of ineffective resource allocations.

Besides these overall findings on the level of detail of ESG controversy reporting, our analysis moreover revealed that the disclosure quality was considerably higher in the pharmaceutical industry than in the textile industry, with increasing quality over the three-year period, while the textile industry showed declines in quality over time. These results fit to previous studies that showed that the pharma industry outperforms other industries in terms of their overall ESG reporting quality and comprehensiveness (e.g. Demir and Min, 2019; Kolk, 2010). A potential explanation is surely their sensitive business field and the associated higher overall observation and expectation of the public. The declining disclosure quality of the textile industry was somewhat more surprising. While the first thought might be that attention to the industry as a

whole has diminished over time, given that the explosive tax fraud cases were already uncovered in 2018, this presumption can be disproven by the circumstance that cases of Uyghur forced labour were made public in 2020, which have brought back a lot of focus to the industry. Therefore, it rather seems that the single textile companies are trying to divert attention from themselves through publishing particularly positive sustainability reports and sections and hereby attempting to present their firms in the most favourable light possible.

Third, the application of sustainability reporting standards seems not to foster ESG controversy disclosure. Even though such standards explicitly challenge companies to disclose their negative ESG contributions (GRI, 2016; SASB, 2019), firms are apparently using a rather superficial approach in their implementation. One problem in this regard is certainly the lack of obligation to fully adhere to the standards. However, what could be additionally obstructive are the discretionary spaces in the determination of the materiality of negative aspects. Although most standards, especially the GRI (GRI, 2016 and GRI, 2021[2]), provide adequate definitions and explanations regarding materiality, the descriptions and associated recommendations for the assessment and reporting leave considerable room for interpretation and thus provide companies with loopholes that are readily exploited, e.g. if a company evaluates local community matters as not material for their business within their overall materiality analysis, but subsequently becomes involved in a related controversy, they can justify the non-reporting by the fact that the topic as a whole is not material for their operations, despite the potentially serious implications of the controversy. In the end, companies are thus left with the freedom to selectively report on the aspects they choose (obviously guided by the level of media attention instead of severity), while outwardly appearing to strive for a comprehensive, true and fair reporting by applying to the guidelines of the sustainability standard setters. In terms of controversy reporting the use of sustainability reporting standards therefore appears to be an abusive reporting practice.

Fourth and finally, our findings suggest that third party assurances do not lead to better ESG controversy disclosure. Particularly the fact that external sustainability audits exclusively apply to sustainability reports/sections and that the controversies in our sample were largely only reported in the legal proceedings of the annual report, with only 8 incidents being disclosed in sustainability reports in 2020, casts strong doubts about the effectiveness of such assurance services in general. The critical literature on sustainability reporting audits has already brought

[2] The GRI published a new standard on material topics, which contains fundamental revisions and improvements in relation to the explanations on materiality in the previous Standard 101 with an effective date of 1 January 2023.

forward several obstacles that diminish confidence in the assurance process as a whole, including concerns about the independence of auditors due to the underlying commercial relationships with companies (Boiral and Gendron, 2011; Perego and Kolk, 2012), the lack of stakeholder engagement (Michelon et al., 2015; Seguí-Mas et al., 2015), and the significant reliance on data and information provided by the firms themselves (Boiral et al., 2019a). However, considering that our sample comprises controversies that have already been published in the media in their respective years and that assurance providers – especially the Big Four – usually have corresponding media alerts regarding controversies, it seems odd that the reporting practice was still that defective. After all, the assurance providers themselves could suffer reputational damage due to the obvious reporting gap between public and reported controversies. Thus, while the above-mentioned fundamental assurance impediments certainly also play a role in the unsatisfactory disclosure of ESG controversies, we perceive the absence of concrete ESG disclosure regulation coupled with the usual engagement of just limited assurance on sustainability information as the main driver of the insufficient assurance result. The lack of mandatory disclosure guidelines in terms of controversy reporting, especially the shortcomings with regard to materiality, allows companies to de facto not publish anything they do not want to publish. Even if auditors attempt to foster balanced sustainability reporting and request their clients to disclose relevant controversies during their audits, they ultimately have no strict regulatory basis for their demand, which leaves companies with the power to decide what to report. The lack of explicit regulation therefore paves the way for companies to keep their reports as clean as possible from negative aspects and moreover gives them the perfect justification for doing so. The limited assurance, in turn, allows assurance providers to save face despite the insufficient controversy reporting, as it gives them the perfect justification for the superficiality of their verification and enables them to distance themselves from the lack of reliability of the assured reports/sections (Boiral et al., 2019b). Limited assurance is the lowest level of assurance possible and comprises a reduced set of procedures in comparison to what is required in a reasonable assurance engagement (IAASB, 2013). The auditors thus implicitly acknowledge that sustainability reports could have undergone more comprehensive testing and that they cannot reasonably assure the quality of the reported information (Boiral et al., 2019b). With this easily applicable, foolproof justification at their disposal, there are no incentives for auditors to become assertive and insist on the inclusion of controversies in the reports. Overall, it can thus be concluded that external assurance of sustainability reports/sections also presents a highly abusive reporting practice in terms of ESG controversy disclosure: While the lack of regulation gives companies the chance to bypass controversy disclosure and the limited

assurance ensures that auditors will not do much against it, the company can still benefit from the high credibility power that goes along with an external assurance. From a firm perspective, such audits are therefore a welcome tool to maintain legitimacy and increase trust in their reporting.

Summing up, our study indicates that companies are still trying to keep their sustainability reports/sections free from negative incidents by only selectively disclosing information on ESG controversies. Given that selective disclosures are widely categorized as a greenwashing technique (e.g. Lyon and Maxwell, 2011; Marquis et al., 2016), this behaviour can be seen as a deliberate attempt to mislead stakeholders. And this is even worsened by the pseudo-transparency and -credibility conveyed through the application of sustainability reporting standards and external assurance, which are in fact only incompletely applied or carried out in an unreliable manner. Thus, our results prove that the general scepticisms towards firms' ESG communication is well founded and that companies appear to intentionally refrain from providing a transparent, true and balanced picture of their ESG situation.

D.5.2 Implications for theory and practice

Our study contributes to the literature in several ways. First, we contribute to enriching legitimacy theory by showing that it is either high media attention or expected litigation that leads companies to disclose their ESG controversies. The reporting is thus solely done in response to external pressure and not out of the motivation to provide a balanced picture. Second, we contribute to the body of literature focusing on the disclosure of negative ESG aspects. In particular, we enrich this research stream by providing an in-depth analysis of the ESG controversy disclosure in the pharmaceutical and textile industry, which has been missing thus far. Moreover, we help expand the knowledge by building on media information about corporate controversies and thus comparing actual controversies against company-reported controversies. Given that previous studies largely focused on the firm's self-reported incidents, our study represents an important and necessary extension of knowledge in the field. Third, we shed more light on the lack of compliance with sustainability reporting standards, especially the GRI. There has already been considerable criticism of companies' cherry-picking behaviour in the adoption of reporting standard recommendations. Our study contributes to this debate by showing that companies largely neglect the GRI and other standards' principle of balanced reporting by providing insufficient disclosure on ESG controversies. The adoption of these standards should therefore not generally be regarded as a quality criterion of corporate ESG communication, despite their constant further developments and improvements over the last

years. Instead, stakeholders should be more aware of the camouflaging potential of such standards in general and particularly in relation to controversial incidents. Finally, we contribute to the literature on the effectiveness of sustainability assurances. In particular, our findings highlight that the verification process of assurance providers fails miserably in terms of the disclosure of negative ESG contributions.

The results of our study have several implications for practitioners and policy makers. Most importantly, they show that more explicit regulation on the disclosure of negative ESG contributions is needed in order to stop firms from whitewashing sustainability information and instead foster truly balanced sustainability reporting. There are still many opponents, especially business associations, who are against the regulation of sustainability disclosure and in this context like to emphasise potentially negative effects on competitiveness and innovativeness as well as the generally high costs and bureaucratic burdens (Bergmann and Posch, 2018; Lu, 2016; Swift and Zadek, 2002). Moreover, they claim that voluntariness offers multiple economic and strategic incentives and would therefore lead to better reporting performances than compulsion (Jain et al., 2015). However, in terms of ESG controversies, our results show impressively that the disclosure does not work on a voluntary basis – not even when the incidents are public – and that clear regulations are urgently needed. A first step in the right direction is certainly the European Union's new Corporate Sustainability Reporting Directive (CSRD), which entered into force on 5th January 2023 and is applicable for the first time in the 2024 financial year. This new directive is a comprehensive extension and modernisation of the existing EU Directive 2014/95/EU and fosters corporate ESG disclosure. Compared to the former rules, it applies to a wider range of companies, also including listed SMEs (European Commission, 2023a). Particularly noteworthy is that the regulation introduces, among other things, the concept of double materiality and generally contains more precise requirements for the materiality assessment (EFRAG, 2023). Nonetheless, following stakeholder consultations prior to the adoption of the act, the exposure draft underwent substantial weakening through a reduction of the initially proposed disclosure requirements by 40% and an approximately 50% decrease in the number of individual reporting data points (European Commission, 2023b). The effectiveness of the new regulations thus remains to be seen in the 2024 sustainability reports. Overall, such progressive reporting regulations, however, are likely to persist as the exception for now, as comparable introductions in other countries, particularly the United States, are not foreseeable at present. Given that an appropriate regulation also heals most problems regarding the insufficient assurance processes, as auditors have more negotiating power over their clients in terms of the aspects that must be included in the report, clear and explicit regulation becomes

immensely crucial. All in all, it is the only way to provide stakeholders and the public with an adequate information base to make informed decisions.

Beside these regulatory implications, our study also offers important ramifications for stakeholders in general and rating agencies in particular. First, they should be aware of the inconsistencies of corporate ESG reporting. Especially rating agencies, who typically rate companies highly for the mere application of GRI guidelines and the engagement of assurance services in their ESG rankings, should fundamentally revise their scoring models and better take into account the actual quality of reports instead of symbolically exploitable actions. Moreover, they should award greater deductions for the obvious concealment of controversies. Since funds, investment companies and private investors often rely on such rankings in their decisions and have the power to direct significant financial flows, it is important that the ratings provide a genuine indication of companies' ESG performance. Second, the poor state of controversy disclosure suggests that stakeholders should put more pressure on companies to foster a balanced reporting. Rating agencies, in particular, are in a good position for doing so, given the importance of their ESG rankings for investors. With companies having an inherent interest in achieving high scores, these ratings can serve as effective leverages to incentivize firms towards adopting a more balanced, and thus more true and fair reporting approach.

Regarding the GRI and other standardization organisations, our study suggests that they should put stricter rules on the application of their standards. As our results show that the guidelines are widely applied, but that the adoption is highly incomplete and rather in an as-it-suits-best-manner, it becomes clear that companies tend to exploit the symbolic potential of the guidelines and try to convey a pseudo-transparency of their reporting. Better monitoring (for which the assurance providers have obviously failed) of the correct application as well as the prohibition of stating that the report was prepared in accordance with GRI/other standards in case it is too incomplete would be important to limit the symbolic exploitation of the standards and promote a more truthful and trustful reporting. Assurance providers, on the other hand, should significantly improve the quality of their audits. Even in case of 'just' limited assurance, they should conduct their verification on the basis of clear and transparent criteria that are comprehensible, e.g. the GRI principles (see also Boiral et al., 2019a). Given that substantial audits are of crucial meaning for the credibility and reliability of disclosed ESG information, sustainability audits should adhere to the same quality standards and, most importantly, the same level of professionalism as financial audits. This way, it can also be ensured that the manipulative utilization of assurance statements for greenwashing purposes is constrained and assurance providers regain reputation.

Finally, our study also holds implications for management. The superficial regulation of ESG reporting turns the disclosure of negative contributions de facto into a managerial decision. Therefore, it is the management's willingness – not its capability – that determines whether controversies are disclosed or not (Jahn and Brühl, 2019). Our findings suggest that companies are much driven by the desire to keep any negative attention away and that therefore they deliberately keep controversies quiet. However, the conscious concealment of negative ESG incidents leads to even worse attention. In fact, firms tend to bleed twice as a result: once for the misbehaviour itself and once for the attempted deception of stakeholders. Overall, this behaviour leads to higher reputational damages and poses a serious risk to legitimacy. As the insufficient reporting seems to be a common problem, companies' management should thus take a lead role and provide thorough and substantive information on their controversial incidents. Only this way can they retain stakeholder trust in the long run and demonstrate their active efforts in providing stakeholders with a sufficient information basis. This is especially important in light of the fact that controversies typically become public over time.

D.5.3 Limitations and future research directions

Like all studies, our work is not free of limitations, which, however, provide opportunities for future research. First, our final sample comprises only large multinational enterprises. A study on medium- and small-sized companies would be useful to understand how different resource availabilities, institutional constraints or stakeholder expectations could influence our findings. Second, we put our focus on the pharmaceutical and textile industry as these sectors have recently caused several ESG scandals, but at the same time are not perceived as classic controversial industries. It would be interesting to examine companies from traditionally high-profile industries as well as low-profile industries to see whether there are differences in the handling of ESG controversy reporting. Third, we used a total of 104 company reports to analyse controversies from 16 different companies over a time span of three years. Although the total of 190 controversies that were analysed in-depth represents a high number of incidents, the sample might still be perceived as rather small given the total number of companies from these industries involved in ESG controversies. However, due to our research design, we consider our findings relevant and important. In fact, a more extensive set of data would have hardly been manageable in a conceptual content analysis approach based on a multi-coder analysis. Papers that extent our time horizon and include more pharma and textile companies would be useful to better identify trends. Fourth, we used Refinitiv Eikon database to collect information on companies' ESG controversies. Like all databases, Refinitiv is not without

certain limitations, e.g. they only consider English-language media for identifying corporate ESG controversies. Against the background, that material controversies always appear in the international press, especially in the case of listed companies, we assume that this weakness does not weigh heavily. Nevertheless, we cannot rule out the possibility that further controversies may have arisen. Future research that relies on other sources, and particularly considers local media, would be important to ensure the completeness of our findings.

D.6 References Section D

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E Incentivising CSR-washing? – The influence of CSR-linked executive compensation on CSR-washing activities and the moderating effect of boards' monitoring commitments

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Martin Thomsen: Formal Analysis

Andreas Dutzi: Review

E.1 Introduction

Over the last several decades, corporate social responsibility (CSR) has become a common business practice (Siltaloppi et al., 2021; Wickert et al., 2016), and a certain level of corporate commitment is now expected by stakeholders, especially from large companies (Amin-Chaudhry, 2016). Actual engagement levels, however, remain very heterogeneous among corporations, even within the same industry and with comparable firm characteristics, as CSR offers high discretionary powers (Dare, 2016). In particular, the lack of specific regulations contributes to the fact that CSR is greatly influenced by the preferences and motivations of companies' top executives (Elmaghrabi, 2021; Hambrick and Mason, 1984; Harjoto and Rossi, 2019). If the CEO or the top management team (TMT) uses CSR to pursue their own goals and invest in corresponding activities and measures, this is not necessarily a problem (e.g. Jiang and Akbar, 2018; Lee et al., 2020; Petrenko et al., 2016). But it becomes an issue when they neglect CSR in favour of purely financial interests (e.g. Davidson et al., 2019; Sajko et al., 2020; Sheikh, 2019). To address such issues and align the interests of CSR-demanding stakeholders with those of the top managers, compensation committees are increasingly linking executives' compensation to the achievement of CSR goals (Derchi et al., 2021; Kolk and Perego, 2014; Maas, 2018).

Given that previous studies on strategic decision-making have found that CEOs generally respond to compensation schemes in the desired way (Chng et al., 2012; O'Connell and O'Sullivan, 2014), the installation of CSR incentives seems to be a promising way to improve firms' CSR performance. And indeed, several recent studies confirm a positive relationship between executives' CSR-linked compensation and improved CSR performance (Cavaco et al., 2020; Derchi et al., 2021; Khenissi et al., 2022). However, though these are encouraging results at first glance, they are subject to data limitations, as they largely rely on CSR data provided by major CSR rating agencies such as MSCI, Refinitiv Eikon or Sustainalytics, which might distort their significance. Particularly concerning about these CSR scores is the fact that they include many symbolic CSR activities, which are usually integrated with comparably high weightings (e.g. MSCI, 2022; Refinitiv, 2022). Therefore, positive influences on these scores might not necessarily be connected with increases in substantive CSR performance, but might also indicate increases in symbolic CSR actions. Supporting this presumption, the current designs of CSR-linked compensation elements raise major concerns about their effectiveness (Maas, 2018). Most CSR targets that are linked to compensation are either overarching or qualitative in nature, which provides executives with considerable discretion in their implementation and moreover makes it particularly difficult to determine their achievement. It is therefore

questionable whether such targets actually improve CSR performance or instead create incentives for CSR-washing, which is characterized by an over-investment in quickly realisable symbolic CSR measures while neglecting substantive actions (Walker and Wan, 2012). Thus, the first objective of the current study is to shed light on the effectiveness of CSR-linked compensation by examining its influence on corporate CSR-washing.

In addition, we are interested in how boards' monitoring commitments affect this relationship. The board, in its function to monitor and advise the CEO and top executives (Adams and Ferreira, 2007; Fama and Jensen, 1983), should play a key role in reducing managers' opportunistic behaviour (Sarkar et al., 2008). However, to effectively perform their monitoring duties, board members must be actively involved and well-informed about the company's operations and strategies (Adams and Ferreira, 2012; Hauser, 2018). Two key aspects in this context are regular attendance at board meetings, which enables them to obtain necessary information and participate in relevant discussions (Lipton and Lorsch, 1992; Masulis et al., 2012), as well as board members' overall workload, which determines their ability to dedicate adequate attention and time to their role (e.g. Ferris and Liao, 2019). To gain a deeper understanding of the relevance of these monitoring commitments in mitigating opportunistic behaviour, the second objective of this study is to analyse how board meeting attendance and board busyness moderate the relationship between CSR-linked executive compensation and CSR-washing.

Based on a panel sample comprising 4,217 firm-year observations from S&P 500 and Stoxx Europe 600 companies for the years 2017-2021, our results reveal that CSR-linked executive compensation is significantly associated with increased levels of CSR-washing, as well as with higher levels of greenwashing and social-washing. Moreover, we find that higher board meeting attendance exerts a weakening effect on these positive relationships. Interestingly, our results also indicate that board busyness exerts weakening effects on the positive relationships between CSR-linked compensation and greenwashing, as well as social-washing. This implies that the diverse experiences of busy board members outweigh their time constraints and contribute positively to the effectiveness of board monitoring.

With this study, we contribute to the literature in three primary ways. First, we enhance the ongoing discourse on the effectiveness of CSR-linked executive compensation by adding a thus-far unexplored dimension. To the best of our knowledge, this is the first study to shift attention from investigating the impact of CSR-linked compensation on overall CSR performance to exploring its role in promoting deceptive CSR practices, specifically CSR-washing. This shift not only extends the current understanding, but also addresses a significant

gap in existing research. Second, we contribute to the board governance literature by demonstrating that board meeting attendance and busyness may mitigate the negative effects of poorly designed compensation incentives on executives' opportunistic behaviour, thereby highlighting the importance of these factors in effective board monitoring. Third, we introduce a new measure of CSR-washing, specifically targeting its detrimental aspects, thereby allowing for a more detailed differentiation between harmful and primarily misleading CSR-washing practices. For practice, our study offers important insights into the potential pitfalls of current CSR compensation practices and provides recommendations for more effective governance strategies.

The remainder of the paper is organised as follows. Section 2 offers a brief review of the relevant literature from which we develop our hypotheses. Section 3 describes our data, main variables, and methodology. Section 4 presents our results, along with robustness checks, and Section 5 discusses the findings, provides implications, and suggests avenues for future research.

E.2 Theoretical background and hypotheses development

E.2.1 CSR and CSR-washing

CSR is an important strategic concept that comprises a company's commitment to working towards sustainable development by behaving responsibly in a variety of ways, particularly in relation to the use of resources, the treatment of employees, community engagement, and the distribution of profits (Kleine and Hauff, 2009; Kolk and van Tulder, 2010; Sarkar and Searcy, 2016). Due to its naturally large scope, CSR is widely used as an umbrella term (Carroll, 1999), and a concrete definition of its appropriate breadth remains controversial (Brammer and Millington, 2008). Dahlsrud (2008) as well as Sarkar and Searcy (2016) analysed a total of over 110 definitions of CSR in their reviews and both found that, even though no agreed-upon definition exists, most definitions are largely congruent and consistently refer to the environmental, social, economic, stakeholder, and voluntariness dimension of the construct. To provide a distinct reference, we rely on the definition of the European Commission, which states that CSR is 'the responsibility of enterprises for their impacts on society' (European Commission, 2011, p. 6). To fully meet their CSR, companies 'should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders' (European Commission, 2011, p. 6). As can be seen from this definition and as outlined by Dahlsrud (2008) and Sarkar and Searcy (2016), a core element of CSR is its stakeholder component.

Accordingly, it is widely acknowledged that CSR is theoretically rooted in stakeholder theory (e.g. Asif et al., 2013; Carroll, 1991; Jamali, 2008). Stakeholder theory recognises that companies bear responsibilities not solely to their shareholders, but also to other interest groups, including employees, customers, suppliers and the broader community, among others (Freeman, 1984). Meeting their stakeholders' demands is essential for maintaining a continuous supply of resources and for reasons of legitimacy (Brown and Forster, 2013; Co and Barro, 2009).

One of the key expectations of stakeholders is that companies demonstrate a genuine and long-term commitment to CSR (Dawkins, 2004; Donia and Tetrault Sirsly, 2016; Freeman and Velamuri, 2006). Positive associations emerge when stakeholders perceive the company's motives to be sincere, whereas unclear or insincere motives, especially along with inconsistencies between CSR reporting and actions, lead to largely negative associations (Wagner et al., 2009; Yoon et al., 2006). Within society and among academics, scepticism about companies' CSR claims and suspicion of organisational misuse of certain CSR instruments are very widespread (Koleva and Meadows, 2021; Lock and Seele, 2018; Nguyen et al., 2023; Orlitzky et al., 2003). Confirming that this scepticism is well founded, several studies have in fact shown that the growing pressure on companies to integrate CSR into their business practices has often resulted in strategic designs of CSR initiatives, which focus on meeting stakeholder needs in appearance, rather than in substance (Sterbenk et al., 2022; Walker and Wan, 2012; Wickert et al., 2016). Over the years, research and media have introduced various different terminologies to discuss such strategies. Building on the work of Meyer and Rowan (1977) and Weaver et al. (1999), several researchers apply the term 'CSR decoupling' to refer to the gap between company's CSR disclosure and their actual CSR performance (e.g. Gull et al., 2023; Marquis and Qian, 2014; Sauerwald and Su, 2019), Wagner et al. (2009) use the term 'corporate hypocrisy' to describe inconsistencies between company statements and observed CSR behaviours, and Walker and Wan (2012) employ 'greenwashing' to specifically characterize the discrepancy between firms' symbolic environmental actions and their substantive environmental practices. Overall, no agreed-upon definition exists for any of these terms, and even though they all have in common that they refer to corporate communications that mislead people into forming overly positive beliefs about a company's CSR practices or products (Lyon and Montgomery, 2015), some variations in their conceptual and definitional use can be found in the literature (Talpur et al., 2023). Within our paper, we understand CSR-washing similarly to Walker and Wan (2012) and define it as the discrepancy between a company's symbolic and substantive CSR actions. In terms of the more detailed

consideration of separate CSR dimensions, we define greenwashing as the discrepancy between a company's symbolic and substantive environmental actions, and social-washing as the discrepancy between a company's symbolic and substantive social actions.

E.2.2 A short history of executive compensation and its linkage to CSR

Executive compensation has always been a much-debated topic. Especially over the last three decades, it has evolved into one of the most controversial issues for companies – particularly listed ones (Glass Lewis, 2013; Lansley, 2011) – following the proliferation of 'fat cat' pay and reward for failure (Ferri and Maber, 2013; The New York Times, 2006). While concrete compensation practices vary widely among countries, industries, and firms (Jansen et al., 2009), the majority of executive remuneration packages are characterized by four basic components: a base salary, a performance-linked annual bonus, stock options, and long-term incentive plans (Murphy, 1999). Within these components, the pay-for-performance element is traditionally used to set financial targets for management in order to align managerial decision-making with the interests of firms' shareholders and thereby mitigate potential agency problems (Kolk and Perego, 2014; Maas, 2018). However, precisely this linkage of financial goals with executive bonuses has led to harsh public criticism, as it promotes excessive risk-taking, cost-cutting, and the overall pursuit of short-term egoistic practices that run counter to long-term societal goals – ultimately building the foundation for the financial crisis and subsequent economic recession (Bannier et al., 2013; Lenssen et al., 2010; Lorsch and Khurana, 2010). As a consequence, several countries have enforced regulations to improve the accountability and performance linkage of executive pay (Stathopoulos and Voulgaris, 2016). One of the most popular mechanisms in this vein is the so-called say-on-pay vote that mandates that the boards of directors at public companies prepare a comprehensive remuneration report and submit it to an annual non-binding shareholder vote during the annual general meeting (Conyon and Sadler, 2010). Initially introduced into UK legislation in 2002, this corporate governance initiative quickly spread to other countries, including the Netherlands, France, the United States, Spain, and Belgium, each with distinct characteristics (voluntary vs. compulsory voting, advisory vs. binding voting results, etc.) (Sanchez-Marin et al., 2017; Stathopoulos and Voulgaris, 2016). However, even though the regulation provides investors with higher influence over the pay packages and pressures boards to negotiate and monitor more efficiently (Bebchuk, 2007; Deane, 2007), the general scepticism and criticism towards executive compensation continue to persist.

Only about a decade ago, performance-linked bonuses – the emblem of irresponsible behaviour (Kolk and Perego, 2014) – slowly began to be well-regarded again, as compensation committees started to tie them to the achievement of CSR goals. Comparable to the traditional pay-for-performance elements, these linkages are rooted in agency theory and were introduced to align managerial decision-making with the growing CSR demands of stakeholders (Derchi et al., 2021; Maas, 2018). The great advantage of this approach is that it has the potential to benefit all parties involved: by broadening the scope of executives' incentive schemes away from strictly shareholder wealth maximisation and towards the inclusion of key stakeholder interests, it serves stakeholders, addresses their increasing demands for CSR enhancements, and ultimately creates value for all of them, with long-term shareholder wealth maximization as an inherent outcome (Ikram et al., 2023; Jensen, 2002). For executives, the remuneration-promoted pursuit of CSR goals and the resulting higher level of commitment to environmental and social issues lead to reputational gains (Barnea and Rubin, 2010; Cai et al., 2020). At the same time, the CSR-related incentives allow them to continue receiving bonuses and boosting overall compensation (Ittner et al., 1997; Kolk and Perego, 2014), albeit without harsh public backlash. Finally, for the board, such compensation schemes represent promising governance mechanisms to reduce executives' discretionary powers in terms of CSR and to ensure a certain commitment towards sustainable development. Given these benefits, the number of companies linking their executives' compensation to CSR targets is constantly growing. Reports by Glass Lewis (2013, 2023), for example, show that while only 29% of blue chip companies from the United States and Europe disclosed a link between executive pay and CSR in 2010, this figure rose to 42% in 2012 and reached 90% in 2023, which demonstrates that this compensation scheme is not only a highly important trend, but has also been established as a widely accepted governance tool as well.

E.2.3 CSR-linked executive compensation and CSR-washing

On paper, CSR-linked executive compensation elements seem to be a win-win for all involved parties. In practice, however, it is difficult to assess their actual effectiveness. Despite several recent regulations aimed at further improving compensation transparency through the requirement of more extensive disclosures (e.g. EU Directive 2017/828, SEC's executive compensation disclosure requirements), the intricacies of CSR bonuses and specifically their achievement continue to remain somewhat of a black box for anyone outside the board and senior management of a company. This is primarily due to the fact that most boards tend to tie compensation to CSR through the use of either soft or overarching targets. Soft, qualitative

targets are characterised by the fact that they lack clear-cut underlying quantifications, e.g. growing carbon neutral or supporting women at all levels (Maas, 2018). Although these types of targets clearly specify the areas in which improvements are to be achieved, they remain entirely open in scope. Overarching targets, on the other hand, are goals that do not focus on concrete measures or dimensions of CSR, but instead tackle the issue as a whole, usually by focussing on ESG rating results, e.g. securing strong sustainability positioning in leading sustainability indices (e.g. Allianz SE, 2021). Overall, both soft and overarching targets promote less concrete objectives, which make it hard for outsiders to fully understand their achievement and simultaneously offer executives considerable discretion in their implementation. Given that symbolic CSR activities can be implemented very easily and quickly, still show a certain commitment, and thereby lead to the achievement of vaguely formulated CSR goals, as is the case with soft and overarching targets, it is questionable whether CSR-linked compensation motivates executives to achieve substantive improvements in CSR performance or instead encourages them to over-invest in symbolic actions.

Previous studies on the effectiveness of CSR incentives have largely found positive results. For example, Cavaco et al. (2020), Derchi et al. (2021), Hong et al. (2016), Khenissi et al. (2022), and Radu and Smaili (2022) all found evidence for a positive relationship between CSR-linked compensation and firms' CSR performance. Maas (2018) went deeper in her analysis of S&P 500 companies and differentiated between the impact of hard, quantifiable targets and soft, qualitative targets in executives' compensation. Her results are manifold, but most importantly, they indicate that soft targets do not lead to better CSR performances, while hard targets indeed contribute to corresponding improvements. Moreover, she shows that fewer than 10% of the sample companies used hard targets in their compensation schemes. Ikram et al. (2023) set a different focus in their recently published study and examined the influence of subjective vs. objective CSR contracting on companies' social performance. Objective contracts are defined in this context as contracts in which the weighting attached to the accomplishment of CSR activities is clearly determined, whereas subjective contracts refer to contracts in which executives are unaware of the amount of compensation linked to the achievement of the specified targets. Their results demonstrate that, overall, both types of contracting lead to higher corporate social standing, but objective contracts are more effective in firms with a low CSR rating; meanwhile, subjective contracts are particularly useful in firms with volatile and unpredictable outcomes. Taken together, all the above-mentioned articles indicate that CSR-linked compensation leads to the intended CSR improvements. However, the results need to be regarded with caution, as they are all based on aggregated CSR scores from major ESG rating

agencies, particularly MSCI (formerly KLD), Bloomberg, Moody's (Vigeo Eiris), and Refinitiv (formerly Asset4). These CSR scores have recently raised significant concerns among academics and regulators regarding their consistency, reliability, and overall quality (Berg et al., 2021; Christensen et al., 2022). For instance, several studies have shown large disagreement across leading ESG rating providers in their assessments of companies' CSR performance (Berg et al., 2022; Chatterji et al., 2016; Gibson Brandon et al., 2021). Li et al. (2023) found that Moody's and S&P assign higher ESG scores to their paying clients (i.e. credit rating clients) compared to firms without commercial ties, Tang et al. (2022) uncovered that MSCI issues higher ESG ratings to its sister firms, and Berg et al. (2021) demonstrated that Refinitiv rewrites historical ratings, leading to positive relationships between ESG scores and stock market performance that were not observable in the original data. Moreover, beyond these rater-specific criticisms, there are also some universal critics of the generally high subjectivity in the measurement processes underlying the score calculations (Bouten et al., 2017) - which increases the risk that even two analysts from the same rating agency may score the CSR performance of a certain company differently - as well as the aggregation of CSR strengths and weaknesses and different CSR dimensions in general - which may result in misleading averages (Capelle-Blancard and Petit, 2017). What is particularly concerning, however, is the fact that a closer look at the methodologies reveals that rating agencies integrate many symbolically exploitable CSR actions into their aggregated scores (e.g. MSCI, 2022; Refinitiv, 2022), e.g. the enactment of various environmental and social policies that say nothing about the actual, substantive implementation of corresponding measures, or the mere publication of a CSR report that does not allow any conclusions regarding the quality of its content. The positive relationships between CSR-linked executive compensation and CSR performance found in the above-mentioned studies may thus be biased and actually indicate a positive influence on symbolic CSR actions.

Summing up, the commonly used soft targets in CSR compensation promote symbolic CSR actions because they fail to define clearly reachable and comprehensible goals, the overarching targets foster symbolic CSR actions by setting specific CSR ratings or the explicit inclusion in CSR rankings as goals, which are easily influenced by symbolic actions, and the results of previous studies that showed positive influences of CSR-linked executive compensation on CSR performance are likely biased and might indeed reveal positive influences on symbolic CSR actions. Given these considerations, we expect that CSR targets in executive compensation lead management to invest in merely symbolic CSR initiatives and claims to which the respective companies fail to live up. Accordingly, we put forward the following hypothesis:

Hypothesis 1 (H1): CSR-linked executive compensation leads to higher levels of CSR-washing.

E.2.4 The moderating effects of boards' monitoring commitments

According to agency theory, the effectiveness of incentives provided to the agent is also highly dependent on the effectiveness of the monitoring and advisory processes implemented by the principal (Milgrom and Roberts, 1992). Therefore, to reduce the risk of exploitation of CSR-linked compensation schemes in CSR-washing ways, a properly working board is of crucial importance. In its function to monitor and advise senior management (Adams and Ferreira, 2007; Fama and Jensen, 1983), the board of directors plays a key role in mitigating opportunistic behaviours of managers and limiting corporate misconduct (Ashbaugh Skaife et al., 2004; Nguyen et al., 2016). Although it is generally difficult to identify and assess the exact factors or combinations of factors that constitute effective board work, previous literature highlights board meeting attendance and board busyness as two major determinants that contribute to the quality of boards' monitoring responsibilities, thereby limiting executives' self-interested decision-making tendencies.

Board meetings are the key avenue through which board members obtain necessary information about companies' operations, business conditions, and managerial decision-making (Adams and Ferreira, 2012; Masulis et al., 2012). Directors' attendance is thus essential to effectively participate in firm governance and fulfil their monitoring and advising responsibilities (Lipton and Lorsch, 1992). Regular absence, in turn, equates to a failure in executing board duties and can be expected to give rise to agency problems (Adams and Ferreira, 2012; Lin et al., 2014). Consistent with these considerations, a growing stream of literature shows that higher meeting attendance is associated with higher firm performance and lower managerial opportunism. Chou et al. (2013), Lin et al. (2014) and Bhatt and Bhattacharya (2015), for example, were able to demonstrate that directors' meeting attendance positively relates to firm performance. Stein and Zhao (2019) go deeper in their analysis and find that lower meeting attendance rates of independent directors are not only associated with lower firm performance, but also with higher CEO compensation, lower earnings quality, reduced CEO turnover-performance sensitivity, and lower M&A performance. In a similar vein, Liu et al. (2016) document that meeting attendance enhances investor protection by alleviating tunnelling, and Sarkar et al. (2008), Qamhan et al. (2018), and Kapoor and Goel (2019) all find that higher meeting attendance is related to lower opportunistic earnings management practices. Given these research results, we expect that higher board meeting attendance leads to better monitoring and thus exerts a

weakening effect on the positive relationship between CSR-linked executive compensation and CSR-washing. Our second hypothesis is therefore the following:

Hypothesis 2 (H2): The positive relationship between CSR-linked executive compensation and CSR-washing is weakened by higher board meeting attendance.

In addition to board meeting attendance, board members' general busyness is also crucial to the effective fulfilment of their duties. Monitoring and advising the CEO and senior management require dedicating considerable time and effort – extending even beyond board meetings – to gather information and make well-informed decisions (Hauser, 2018). The National Association of Corporate Directors, for instance, recommends that directors devote a minimum of 160 hours per year to each board position they hold. Relatedly, critics posit that service on multiple boards may increase the workload of directors beyond what is reasonable, resulting in disproportionately reduced time and attention paid to the individual board appointments (Ferris and Liao, 2019; Fich and Shivdasani, 2006). Opposing views, however, argue that busy directors are usually characterised by high qualifications, broad skills, large business networks, and diverse experience, which make them highly sought after (Fama and Jensen, 1983; Field et al., 2013; Kaplan and Reishus, 1990). From this reputation perspective, directors who serve on several boards represent important sources of knowledge for the company and provide valuable contacts, leading to more efficient decision-making, greater transparency, and less dependence on internally generated cash for capital expenditures, which in turn offsets the effect of their time constraints (Adams et al., 2010; Ferris et al., 2020; Harris and Shimizu, 2004). Empirical studies in this vein show rather mixed results. While Perry and Peyer (2005), Field et al. (2013), Elyasiani and Zhang (2015), and Rapp et al. (2018) find positive effects of busy directors on firm value and firm performance, Core et al. (1999), Fich and Shivdasani (2006), Tan et al. (2019), and Lee and Lok (2020) document negative impacts. Interestingly, in terms of preventing opportunistic management behaviour, most studies suggest that busy boards are associated with higher self-interested decision-making tendencies of executives. Sarkar et al. (2008), Ferris and Liao (2019), and Kim (2022) find that companies with busy boards exhibit higher earnings management; Core et al. (1999) and Pathan et al. (2019) show that higher board busyness is associated with higher CEO compensation; and Beasley (1996) demonstrates that busy boards increase the probability of accounting fraud. In light of these findings, we expect that multiple directorships are detrimental to boards' monitoring effectiveness in terms of CSR-washing, as CSR-washing also reflects managers' self-serving behaviour. In line with this, we hypothesize the following:

Hypothesis 3 (H3): The positive relationship between CSR-linked executive compensation and CSR-washing is strengthened by board busyness.

Figure E-1 presents the conceptual model of our study, which includes board meeting attendance and board busyness as moderators of the relationship between CSR-linked compensation and CSR-washing.

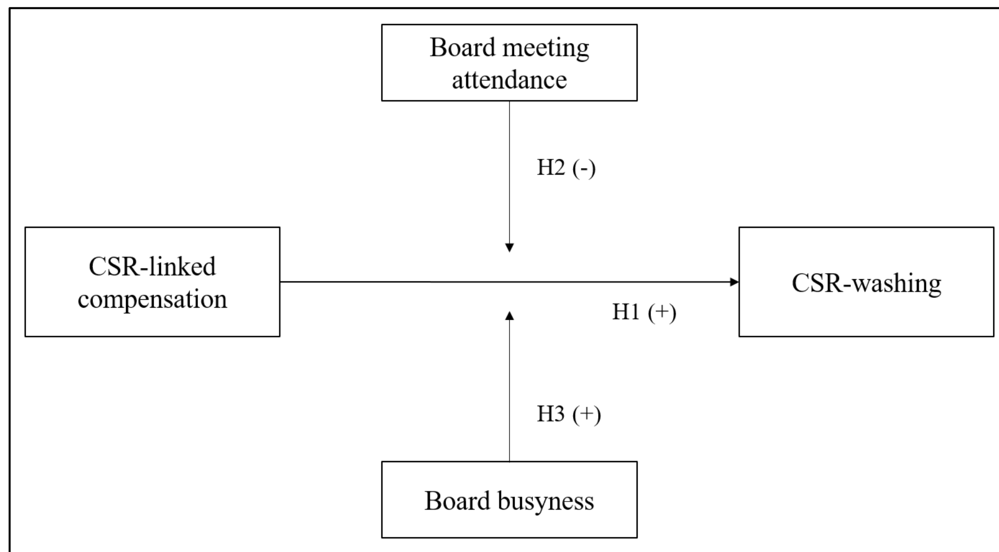

Figure E-1: Conceptual model

E.3 Methodology

E.3.1 Sample and data sources

To conduct our analyses, we built a panel data set based on all S&P 500 and Stoxx Europe 600 companies for the time period between 2017 and 2021. We focused on these two indices, as they comprise the largest and most powerful corporations from developed countries. These companies tend to have considerable global influence and their CSR practices – which often serve as benchmarks – possess the ability to significantly impact CSR trends and norms worldwide, making an analysis of their current practices particularly interesting and relevant. Our data collection starts with the year 2017 because the EU Directive 2014/95/EU on the disclosure of non-financial and diversity information came into force in that year, thus potentially influencing companies' engagement in and communication of CSR initiatives. We obtained all CSR and financial data from the Refinitiv Eikon database (formerly Thomson Reuters). From an initial sample of 5,500 firm-year observations, we excluded a total of 1,283 observations because of missing data points. In particular, we first excluded 210 observations due to incomplete data for the construction of our dependent variables; we then dropped a

further 546 observations because of missing board variables and another 477 observations because of the absence of control variables. Lastly, 50 observations had to be excluded due to missing values for our lagged compensation variable. The final sample consists of 4,217 firm-year observations. Table E-1 summarises our sample selection.

Table E-1: Sample selection

Criteria	**Firm-years**
Full sample: All Refinitiv Eikon firm-years between 2017 and 2021	5,500
With missing values for dependent variables	(-210) = 5,290
With missing values for board variables	(-546) = 4,744
With missing values for control variables	(-477) = 4,267
With missing values for lagged compensation variable	(-50) = **4,217**

E.3.2 Variables

E.3.2.1 Dependent variable

CSR-washing. To determine CSR-washing, we constructed a discrepancy score based on CSR data from the Refinitiv Eikon database that reflects the divergence between a firm's symbolic and substantive CSR activities.

Our first component, the symbolic CSR score, resembles a company's efforts to implement easily realisable CSR measures with high visibility, which are not automatically accompanied by a substantive improvement in CSR performance. We use Refinitiv's 'CSR strategy score' from the governance dimension to reflect such symbolic CSR actions. This score integrates firm measures that are primarily used to demonstrate that the company attaches great importance to CSR and incorporates CSR aspects into its strategic and operational decision-making processes (see Table E-2 for the subcomponents). All these measures are characterised by the fact that they remain symbolic in the way that they appear to show an advanced commitment to CSR, while in reality, they do not provide any indication of the quality of the actions undertaken, e.g. a published CSR report does not mean that the company discloses all material CSR issues and provides a balanced view for its stakeholders, just as the integration of a sustainability committee does not necessarily mean that more substantive CSR activities are promoted. Consequently, all integrated measures have the potential to further firms' CSR performance, but they do not automatically do so. This measure of symbolic CSR is similar to those used in previous studies (e.g. Miroshnychenko, 2021; Taglialatela et al., 2023; Testa et al., 2018). The symbolic CSR score takes values between 0 and 100.

Table E-2: Composition of the symbolic CSR score

Subcomponents of the symbolic CSR Score	Description
Sustainability committee	Does the company have a CSR committee or team?
Integrated strategy in MD&A	Does the company explicitly integrate financial and extra-financial factors in its management discussion and analysis (MD&A) section in the annual report?
Global Compact signatory	Has the company signed the UN Global Compact?
Stakeholder engagement	Does the company explain how it engages with its stakeholders?
CSR sustainability reporting	Does the company publish a separate CSR/H&S/Sustainability report or publish a section in its annual report on CSR/H&S/sustainability?
GRI report guidelines	Is the company's CSR report published in accordance with the GRI guidelines?
CSR sustainability report global activities	Does the company's extra-financial report take into account the global activities of the company?
CSR sustainability external audit	Does the company have an external auditor of its CSR/H&S/sustainability report?
ESG reporting scope	The percentage of the company's activities covered in its environmental and social reporting.
UNPRI signatory	Has the company signed the United Nation Principles for Responsible Investment (UNPRI)?
SDG support	Does the company support the UN Sustainable Development Goal 1-17 (SDG 1-17)

To identify which companies show a misfit between their symbolic and substantive CSR activities, our second component of the discrepancy score, the CSR controversy score, reflects companies' engagement in CSR controversies. Most previous studies have used CSR performance scores from major CSR rankings and databases to measure firms' substantive CSR actions within a CSR-/greenwashing context (e.g. Roulet and Touboul, 2015; Tashman et al., 2019; Yu et al., 2020). These ratings generally score companies according to their overall performance level in the CSR domain, focusing on the specific contributions (positive or none) to the environmental, social, and governance spheres of corporate CSR. However, negative CSR contributions in the form of uncovered scandals, controversies, and severe misconduct are either not considered or presented in separate scores (see, for example, MSCI, 2022; Refinitiv, 2022). Previous CSR-/greenwashing measurements thus primarily reflect the misleading, but not necessarily harmful, mismatch between CSR talk and walk and illustrate how companies try to appear more CSR-conscious than they are, hereby neglecting the detrimental side of CSR-washing. Firms that install multiple strategic CSR measures and present themselves as including CSR considerations into their everyday decision-making processes could be expected to avoid any form of CSR controversy and demonstrate exemplary behaviour, as long as they live up to their claims. Every mismatch in this vein therefore reflects the detrimental power of

CSR-washing, which harms society. As we are interested in this dark side of CSR-washing, we use Refinitiv's CSR controversy data to reflect firms' substantive CSR actions.

Refinitiv Eikon collects information on companies' involvement in scandals across 23 different topics from the environmental, social, and governance dimensions of CSR. These include, among others, resource use, child labour, human rights, and customer health and safety controversies. Depending on the number and severity of controversies, an aggregated controversy score is calculated for each firm (Refinitiv, 2022). As recent studies have shown that aggregated scores from Refinitiv, which encompass data from the environmental and social dimensions, are highly distorted (Berg et al., 2021), we refrained from using these overall controversy scores. Instead, we calculated our own scores based on the raw controversy data extracts. In particular, we first collected the number of environmental and social controversies in which each company was involved and then calculated the mean and standard deviations for both dimensions across the full sample. To first compute the environmental and social controversy scores, we divided a firm's respective controversy count by the sum of the mean controversy count plus one time the standard deviation[3] and multiplied the result by 100. To maintain consistency and interpretability within our scoring system, values exceeding 100 were capped at this cut-off point. This approach not only ensures that all scores remain within our standardised range of 0 to 100, but also that companies with controversy counts higher than one standard deviation above the mean – reflecting clearly worse-than-average performances – receive the highest controversy score. Finally, we subtract the score from 100 to signify that a score of 100 means that the respective firm is not involved in any environmental or social controversy, whereas a score of 0 shows that it is involved in multiple scandals (this step is important to ensure the right value for determining the discrepancy score later on). To determine the overall CSR controversy score, we calculated the average of the environmental and social controversy scores. To ensure better comprehensibility, we provide a summary of the calculation in formula F(1).

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[3] We use the sum of the mean and one time the standard deviation as the basis for our controversy score calculation, as it provides a sufficient indication of a company's performance relative to the overall sample. The mean reflects the average number of controversies for all sample companies per year, while the standard deviation captures the variability around this mean. Summing both measures therefore provides a nuanced and informative threshold that indicates the boundary within which the majority of data points fall. By setting this threshold as a benchmark, we ensure that our controversy score effectively differentiates between still-typical levels of CSR-related controversies and those exceeding normal variances. Given that three companies showed exceptionally high social controversy counts and thus represent extreme outliers compared to the rest of the sample (over 120 controversy counts vs. an average of 5 controversies), we excluded them from the mean and standard deviation calculations for the social dimension to ensure that the social controversy score is not biased by these outliers.

$$CSR\ conroversy\ score\ = \left(\left(100 - \frac{x_i^{env}}{(\bar{x}^{env} + \sigma^{env})} * 100\right) + \left(100 - \frac{x_i^{soc}}{(\bar{x}^{soc} + \sigma^{soc})} * 100\right) \right) / 2 \quad \text{(F1)}$$

We calculated our discrepancy score as the subtraction of the CSR controversy score from the symbolic CSR score. This procedure allows us to identify which companies show a strong mismatch between both variables and thus engage in CSR-washing. We note that CSR-washing is a continuous variable, where an increase in the CSR-washing score signifies a growing difference between symbolic and substantive CSR actions, with the latter being quantified by controversial CSR contributions.

To gain an even deeper understanding of companies' CSR-washing behaviour, we also calculate a separate *greenwashing* and *social-washing* score, following the same procedure as outlined above, but subtract the respective environmental and social controversy scores from the symbolic score. This disaggregation of overall CSR-washing activities into their individual dimensions allows for a more thorough comprehension of whether firms engage in deceptive practices uniformly across all CSR aspects or whether their focus is skewed towards a specific dimension.

E.3.2.2 Independent variable

Executives' CSR-linked compensation. Following previous studies (Derchi et al., 2021; Radu and Smaili, 2022), we use a dummy variable to capture the presence of CSR-linked executive compensation. The variable takes a value of 1 for the presence of CSR-linked executive compensation and 0 otherwise.

E.3.2.3 Moderator variables

Board attendance. We measure board meeting attendance as the average overall attendance percentage of board meetings within the respective fiscal year, which is in line with several other studies (e.g. Barros and Sarmento, 2020; Lin et al., 2014; Wang et al., 2022).

Board busyness. To capture board busyness, we calculate the average number of other corporate board appointments for the whole board of directors. Specifically, we first determine the number of additional board appointments, signifying that a director serving on just one board has no outside board appointments (see also Jiraporn et al., 2009; Perry and Peyer, 2005), and then divide this number by the total number of directors of the respective board to account for the effect of board size.

E.3.2.4 Control variables

To account for other factors that could impact the likelihood of CSR-washing, we included several board- and firm-level control variables in our analyses. At the board level, we control for general board characteristics and structural factors that previous research suggests may potentially influence companies' CSR strategies and mitigation of managerial opportunism. In particular, we incorporate *board skills*, measured as the percentage of board members who have either an industry-specific or a strong financial background. Prior literature indicates that higher expertise within the company's field of operation fosters a deeper understanding of the sector's environmental and social challenges, leading to greater sensitivity and awareness of the (il)legality of certain activities (Mousavi et al., 2022; Nguyen et al., 2016). Similarly, board members with financial expertise are more sensitive to the long-term risks associated with improper CSR claims (Shaukat et al., 2016; Yu et al., 2016). Both backgrounds may thus foster a stronger prevention of misconduct and opportunistic executive behaviour, as well as a prioritization of genuine CSR efforts over symbolic practices. Second, we control for *board size,* measured as the total number of directors serving on the board at the end of the fiscal year, because larger boards often face challenges related to high coordination costs and free-rider problems, which could impair their monitoring effectiveness and lead to higher levels of CSR-washing (Sauerwald and Su, 2019). Third, we include *board independence*, which we operationalize as the percentage of independent board members. Independent directors tend to be more conscious of stakeholder demands and may thus encourage the pursuit of a substantive CSR strategy (Godos-Díez et al., 2018; Gull et al., 2023). Fourth, we consider influences of board structure by introducing a dummy variable, denoted as '1' if the board is unitary and '0' for two-tier boards (Khan et al., 2020). Fifth, we use *board diversity*, measured as the percentage of female directors on the board, to account for the fact that women are associated with higher ethical standards and more rigorous monitoring of managerial performance than their male counterparts (Adams and Ferreira, 2009; Cumming et al., 2015; Jain and Zaman, 2020), which may contribute to better prevention of irresponsible behaviour such as CSR-washing within the firm. Lastly, we control for *CEO duality*, as it allows the CEO to accumulate more power and influence in the organization, which could encourage greater self-interested decisions and opportunistic behaviour (e.g. Gull et al., 2023; Wijethilake and Ekanayake, 2020). CEO duality is measured with a dummy variable, taking a value of '1' if the CEO is also the chairperson of the board and '0' if the chairperson is a different board member.

At the firm level, we first control for firm *size*, measured as the natural logarithm of total assets (Bhattacharya et al., 2021; Cheng et al., 2014). Larger companies tend to be involved in CSR

controversies and misconduct more often than their smaller counterparts (Li et al., 2017; Schwoy et al., 2023). At the same time, they are subject to greater stakeholder pressure and higher public interest, which may lead them to put a stronger focus on presenting positive achievements and symbolic actions to appear more committed (e.g. Delmas and Burbano, 2011; Roulet and Touboul, 2015; Sauerwald and Su, 2019). Second, we include a proxy for firm *age*. Given that older companies are comparably secure in their position, as they have consolidated economic relationships and can benefit from their past experience (Meznar and Nigh, 1995; Rossi, 2016), they are less affected by negative consequences of uncovered CSR-washing than younger firms and may therefore participate more in such practices (e.g. Miroshnychenko, 2021). We compute firm age using the number of years since incorporation (D'Amato and Falivena, 2020; Oh et al., 2016). Previous research also suggests that highly profitable and financially stable companies are more prone to engaging in CSR-washing because they are better able to deal with reputational risks and to absorb the financial burdens associated with fines and legal expenses resulting from controversial CSR activities (Delmas and Burbano, 2011). On the other hand, less-profitable firms whose capital structure may also be heavily tied to debt face greater financial pressure to perform in a compliant manner and are also more closely monitored by their creditors (Ghitti et al., 2020). We therefore include several variables related to firms' financial performance and constraints. In particular, we control for different aspects of firms' profitability by including earnings per share (*EPS*), as well as return on assets (*ROA*) (Bodhanwala and Bodhanwala, 2018; Lim and Rokhim, 2021; Mahoney et al., 2013; Wedari et al., 2021), the latter being calculated as net income divided by the average of the previous year's and current year's total assets. Moreover, we account for financial risk proxied by leverage and cashflows (Islam et al., 2021; Miroshnychenko, 2021; Tashman et al., 2019; Walker and Wan, 2012). *Leverage* is computed as the ratio of total debt to total assets (Hossain et al., 2023; Moussu and Ohana, 2016), while *cashflow* is estimated as the natural logarithm of the sum of net income and all non-cash charges or credits less distributions for preferred shares and general partners. Finally, we include *industry* and *year* fixed effects to control for variations in CSR-washing behaviour across industries (Du, 2015; Ruiz-Blanco et al., 2022) and changes in economic conditions across years (Hu et al., 2023; Wang et al., 2018).

E.3.3 Model specifications

To test our hypotheses, we ran a series of panel regressions with both industry- and year-fixed effects. In order to test H1, the models shown in equations (1), (2) and (3) estimate CSR-washing, greenwashing, and social-washing, respectively, on the basis of CSR-linked

compensation, and they also take into account the control variables that reflect characteristics of the board as well as the company related to the dependent variables:

$$CSR\text{-}washing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 Board\ attendance_{it} + \beta_2 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (1)$$

$$Greenwashing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 Board\ attendance_{it} + \beta_2 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (2)$$

$$Social\text{-}washing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 Board\ attendance_{it} + \beta_2 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (3)$$

In H2, we examine how board attendance moderates our baseline relationships. The models presented in equations (4) – (6) therefore include the interaction term of CSR-linked compensation and board attendance:

$$CSR\text{-}washing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 CSR\text{-}linked\ compensation_{it} \times Board\ attendance_{it} + \beta_3 Board\ attendance_{it} + \beta_4 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (4)$$

$$Greenwashing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 CSR\text{-}linked\ compensation_{it} \times Board\ attendance_{it} + \beta_3 Board\ attendance_{it} + \beta_4 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (5)$$

$$Social\text{-}washing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 CSR\text{-}linked\ compensation_{it} \times Board\ attendance_{it} + \beta_3 Board\ attendance_{it} + \beta_4 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (6)$$

Finally, to test H3, we integrate the interaction term of CSR-linked compensation and board busyness, as shown in equations (7) – (9):

$$CSR\text{-}washing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 CSR\text{-}linked\ compensation_{it} \times Board\ busyness_{it} + \beta_3 Board\ attendance_{it} + \beta_4 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (7)$$

$$Greenwashing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 CSR\text{-}linked\ compensation_{it} \times Board\ busyness_{it} + \beta_3 Board\ attendance_{it} + \beta_4 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (8)$$

$$Social\text{-}washing = \beta_0 + \beta_1 CSR\text{-}linked\ compensation_{it} + \beta_2 CSR\text{-}linked\ compensation_{it} \times Board\ busyness_{it} + \beta_3 Board\ attendance_{it} + \beta_4 Board\ busyness_{it} + \sum_{i=1}^{n} \beta_n Controls_{it} + \varepsilon_{it} \quad (9)$$

To control our data for the presence of multicollinearity, we compute the variance inflation factors of the variables in our models and find that they are all below five. Therefore, multicollinearity is not a concern in this study. In all models, we estimate robust standard errors, clustered at the industry level, to correct for heteroscedasticity.

E.4 Results

E.4.1 Descriptive statistics and correlations

Table E-3 reports the descriptive statistics for our sample (4,217 firm-years), which consists of 2,405 firm-years with and 1,812 firm-years without CSR-linked compensation. As a preliminary examination of hypothesis 1, we find significant mean differences in our main variables of interest (i.e. CSR-washing, greenwashing, and social-washing) between firms with and without corresponding compensation schemes. Consistent with our expectation, the results indicate that companies that tie their executive pay to CSR targets demonstrate significantly higher means in CSR-washing, greenwashing, and social-washing.

In Table E-4, we provide Pearson (Spearman) correlations below (above) the diagonal for the sample. Lending further tentative support to hypothesis 1, we find that CSR-linked compensation shows significantly positive correlations with CSR-washing, greenwashing, and social-washing.

Table E-3: Descriptive statistics

	N	Mean	S.D.	p25	p50	p75	Diff.
CSR-washing	4217	-14.758	47.943	-44.612	-16.045	9.773	
No CSR-linked compensation	1812	-33.584	44.830	-64.799	-32.581	-11.460	-33.010***
CSR-linked compensation	2405	-0.574	45.262	-27.273	-8.000	30.208	(-23.54)
Greenwashing	4217	-33.838	30.425	-51.249	-25.333	-12.097	
No CSR-linked compensation	1812	-46.143	32.221	-73.678	-39.745	-18.588	-21.576***
CSR-linked compensation	2405	-24.567	25.322	-35.667	-17.557	-7.261	(-24.34)
Social-washing	4217	-24.181	40.758	-47.337	-20.747	-4.278	
No CSR-linked compensation	1812	-39.179	40.139	-67.961	-37.087	-15.106	-26.298***
CSR-linked compensation	2405	-12.881	37.447	-30.348	-13.016	-0.923	(-21.89)
Board attendance	4217	88.901	10.890	75.000	94.940	98.550	
No CSR-linked compensation	1812	86.719	11.068	75.000	90.000	98.000	-3.826***
CSR-linked compensation	2405	90.545	10.459	75.000	96.030	98.840	(-11.47)
Board busyness	4217	1.094	0.597	0.692	1.000	1.429	
No CSR-linked compensation	1812	0.988	0.571	0.600	0.923	1.273	-0.187***
CSR-linked compensation	2405	1.175	0.603	0.769	1.091	1.571	(-10.17)
Board skills	4217	47.867	20.896	33.333	50.000	62.500	
No CSR-linked compensation	1812	50.033	21.008	36.364	50.000	66.667	3.799***
CSR-linked compensation	2405	46.234	20.667	31.579	46.154	60.000	(5.87)
Board size	4217	11.085	3.198	9.000	11.000	12.000	
No CSR-linked compensation	1812	10.583	3.400	9.000	10.000	12.000	-0.881***
CSR-linked compensation	2405	11.464	2.982	10.000	11.000	13.000	(-8.94)
Board independence	4217	75.393	18.843	64.286	80.000	90.000	
No CSR-linked compensation	1812	75.289	18.233	66.667	80.000	88.889	-0.183
CSR-linked compensation	2405	75.472	19.294	63.636	81.250	90.909	(-0.31)
Board structure	4217	1.182	0.387	1.000	1.000	1.000	
No CSR-linked compensation	1812	1.161	0.369	1.000	1.000	1.000	-0.037***
CSR-linked compensation	2405	1.198	0.399	1.000	1.000	1.000	(-3.07)
Board diversity	4217	30.132	10.736	23.077	30.000	37.500	
No CSR-linked compensation	1812	27.657	10.831	20.000	27.273	33.333	-4.340***
CSR-linked compensation	2405	31.997	10.280	25.000	31.250	38.889	(-13.26)
CEO duality	4217	0.580	0.494	0.000	1.000	1.000	
No CSR-linked compensation	1812	0.548	0.498	0.000	1.000	1.000	-0.056***
CSR-linked compensation	2405	0.604	0.489	0.000	1.000	1.000	(-3.66)
Size	4217	23.741	1.577	22.686	23.588	24.667	
No CSR-linked compensation	1812	23.306	1.531	22.303	23.178	24.128	-0.762***
CSR-linked compensation	2405	24.068	1.533	23.009	23.928	24.983	(-15.99)
Age	4217	3.418	0.927	2.890	3.434	4.111	
No CSR-linked compensation	1812	3.374	0.883	2.890	3.401	3.998	-0.077***
CSR-linked compensation	2405	3.451	0.958	2.890	3.466	4.174	(-2.69)
EPS	4217	4.443	5.086	1.220	3.020	5.742	
No CSR-linked compensation	1812	4.717	5.264	1.310	3.272	5.915	0.481***

	N	Mean	S.D.	p25	p50	p75	Diff.
CSR-linked compensation	2405	4.236	4.939	1.165	2.830	5.610	(3.04)
ROA	4217	0.076	0.063	0.030	0.062	0.106	
No CSR-linked compensation	1812	0.087	0.067	0.038	0.075	0.120	0.020***
CSR-linked compensation	2405	0.067	0.058	0.027	0.054	0.092	(10.52)
Leverage	4217	0.275	0.169	0.150	0.263	0.383	
No CSR-linked compensation	1812	0.274	0.187	0.125	0.260	0.391	-0.001
CSR-linked compensation	2405	0.275	0.154	0.169	0.265	0.379	(-0.23)
Cashflow	4217	21.093	1.274	20.238	21.032	21.912	
No CSR-linked compensation	1812	20.775	1.205	20.020	20.726	21.542	-0.558***
CSR-linked compensation	2405	21.333	1.271	20.477	21.275	22.198	(-14.44)

Notes: The last column presents the difference in means between firms with and without CSR-linked compensation and the t-statistic for mean differences. *, **, *** indicate significant mean differences at the 10%, 5% and 1% levels, respectively.

Table E-4: Correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	CSR-washing		**0.8121**	**0.9261**	**0.3522**	**0.0841**	**0.2453**	**-0.1264**	**0.3397**	**0.0655**	**0.0560**	**0.2393**	**0.0482**	**0.5065**	**0.1118**	-0,0074	**-0.1799**	**0.0682**	**0.4976**
2	Greenwashing	**0.7910**		**0.8771**	**0.3533**	**0.1289**	**0.2327**	**-0.1168**	**0.2729**	**0.0622**	**0.0897**	**0.2443**	**0.0912**	**0.3797**	**0.1191**	**-0.0511**	**-0.1720**	**0.0922**	**0.3686**
3	Social-washing	**0.9060**	**0.8325**		**0.3451**	**0.0802**	**0.2521**	**-0.1214**	**0.3272**	**0.0630**	**0.0741**	**0.2383**	**0.0675**	**0.4900**	**0.1208**	-0,0247	**-0.1709**	**0.0793**	**0.4838**
4	CSR-linked compensation	**0.3403**	**0.3504**	**0.3186**		**0.1602**	**0.1599**	**-0.0963**	**0.1690**	0,0294	**0.0482**	**0.2009**	**0.0560**	**0.2467**	**0.0493**	**-0.0558**	**-0.1599**	0,0239	**0.2173**
5	Board attendance	**0.1174**	**0.1903**	**0.1173**	**0.1741**		**0.0567**	**-0.2574**	-0,0026	**-0.3477**	**0.3209**	**0.2324**	**0.3533**	**-0.0664**	**0.1095**	**-0.2798**	**-0.1368**	**-0.0807**	**-0.1336**
6	Board busyness	**0.2314**	**0.2210**	**0.2318**	**0.1543**	**0.0817**		**0.0419**	**0.0896**	**0.0981**	**-0.0496**	**0.1475**	**0.0672**	**0.2003**	**0.0980**	**-0.0477**	-0,0191	**0.0417**	**0.2446**
7	Board skills	**-0.1275**	**-0.1466**	**-0.1191**	**-0.0914**	**-0.3196**	**0.0422**		**-0.1697**	**0.2216**	**-0.4462**	**-0.2218**	**-0.2433**	-0,0233	**-0.1400**	**0.0735**	**0.1440**	0,011	0,015
8	Board size	**0.2812**	**0.2325**	**0.2717**	**0.1365**	**-0.0860**	**0.1104**	**-0.1582**		**-0.0632**	0,0033	**0.0949**	**-0.0997**	**0.5118**	**0.1310**	**0.1373**	**-0.2798**	**0.0599**	**0.4439**
9	Board independence	**0.0454**	0,0217	**0.0454**	0,0039	**-0.3102**	**0.0990**	**0.1528**	**-0.1475**		**-0.1367**	**-0.1407**	**-0.1567**	**0.1620**	**-0.0806**	**0.2835**	**0.0773**	**0.0883**	**0.2096**
10	Board structure	**0.0535**	**0.1069**	**0.0712**	**0.0482**	**0.2529**	**-0.0570**	**-0.4283**	**-0.0540**	**-0.0549**		**0.1460**	**0.3998**	-0,0197	0,0199	**-0.0630**	**-0.1184**	**-0.0825**	**-0.0585**
11	Board diversity	**0.2376**	**0.2721**	**0.2340**	**0.2006**	**0.2735**	**0.1545**	**-0.2322**	**0.0926**	**-0.1345**	**0.1309**		**0.1096**	**0.1097**	**0.1520**	**-0.1087**	**-0.1243**	**-0.0397**	**0.0622**
12	CEO duality	**0.0523**	**0.0979**	**0.0718**	**0.0560**	**0.3232**	**0.0543**	**-0.2351**	**-0.1415**	**-0.1414**	**0.3994**	**0.1179**		**-0.1150**	**-0.0351**	**-0.3224**	**-0.0973**	**-0.1103**	**-0.1730**
13	Size	**0.5166**	**0.3652**	**0.5151**	**0.2368**	-0,0195	**0.2008**	-0,0191	**0.4503**	**0.1186**	-0,0051	**0.1139**	**-0.0884**		**0.0814**	**0.1815**	**-0.4984**	0,0165	**0.8199**
14	Age	**0.1212**	**0.1489**	**0.1235**	**0.0404**	**0.1066**	**0.0896**	**-0.1343**	**0.1110**	**-0.0839**	0,0262	**0.1611**	**-0.0414**	**0.0797**		-0,0054	**-0.0307**	-0,0112	**0.0897**
15	EPS	0,0249	-0,0152	0,0146	**-0.0463**	**-0.1716**	**-0.0482**	**0.0367**	**0.0689**	**0.1529**	-0,0061	**-0.0627**	**-0.1964**	**0.1385**	0,0118		**0.3263**	0,0079	**0.3487**
16	ROA	**-0.1627**	**-0.1755**	**-0.1582**	**-0.1563**	**-0.1698**	**-0.0628**	**0.1563**	**-0.2357**	**0.0798**	**-0.1077**	**-0.1016**	**-0.0764**	**-0.4603**	**-0.0410**	**0.2642**		**-0.0376**	**-0.0746**
17	Leverage	**0.0450**	**0.0701**	**0.0490**	0,0024	**-0.0945**	0,0028	0,0205	0,0244	**0.0852**	**-0.0867**	**-0.0511**	**-0.1085**	-0,0276	-0,0202	-0,0007	**-0.0629**		**0.0810**
18	Cashflow	**0.5188**	**0.3604**	**0.5134**	**0.2166**	**-0.1170**	**0.2274**	0,0157	**0.3768**	**0.1797**	**-0.0629**	**0.0641**	**-0.1721**	**0.7862**	**0.0887**	**0.2921**	**-0.0337**	**0.0701**	

Notes: N = 4,217 firm years. Pearson correlations are reported below the diagonal, and Spearman correlations are reported above the diagonal. All reported correlations in bold are statistically significant at the 5% level or better.

E.4.2 Main analyses

The results of the multivariate regression analyses are presented in Table E-5. In support of hypothesis 1, we find that CSR-linked executive compensation relates significantly positively to CSR-washing ($\beta = 12.378$, $p < 0.01$, model 1), greenwashing ($\beta = 8.979$, $p < 0.01$, model 2), and social-washing ($\beta = 10.504$, $p < 0.01$, model 3) at the 1% level. In models 4, 5 and 6, we introduce the interaction term between CSR-linked compensation and board attendance to test hypothesis 2. Confirming our expectation that higher board meeting attendance will negatively moderate the positive relationship between CSR-linked compensation and CSR-washing, as well as greenwashing and social-washing, the coefficients of the interaction terms are all negative and highly significant ($\beta = -0.348$, $p < 0.01$, model 4; $\beta = -0.532$, $p < 0.01$, model 5 and $\beta = -0.442$, $p < 0.01$, model 6). Hypothesis 3 posits that busy boards are more distracted and will therefore further strengthen the positive relationship between CSR-linked compensation and CSR-washing. In models 7, 8 and 9, we include the corresponding interaction terms. Regarding CSR-washing, we do not find a significant moderation effect of board busyness ($\beta = -2.394$, $p > 0.1$, model 7). However, in terms of greenwashing and social-washing, we do find significant coefficients of the interaction terms on the 1% and 10% level respectively, which are albeit negative ($\beta = -5.380$, $p < 0.01$, model 8 and $\beta = -2.981$, $p < 0.1$, model 9). We thus do not find support for hypothesis 3, but partial evidence for its opposite effect.

The control variables – with the exception of board independence, board diversity, and EPS – show the expected signs. Interestingly, both board independence and board diversity have positive and significant coefficients, indicating that higher numbers of independent directors and higher gender diversity on boards lead to higher levels of CSR-washing, greenwashing, and social-washing. EPS, on the other hand, is significantly negatively related to all CSR-washing variables, suggesting that companies with higher EPS might use their resources more effectively to prevent CSR controversies and invest in substantive CSR initiatives, rather than symbolic actions.

To add depth to our findings, we additionally tested our hypotheses separately for the S&P 500 and Stoxx Europe 600 companies. We consider this reasonable, as the regulatory framework for CSR differs between the United States and Europe. Overall, European countries, and the European Union in particular, have been pioneers in promoting CSR reporting (Christensen et al., 2021). Accordingly, they enacted more concrete regulations, most notably the European Non-Financial Reporting Directive (2014/95/EU), which requires listed firms above certain levels of sales, capital, and employees to integrate non-financial statements into their financial

reports to ensure greater transparency of CSR activities. In contrast, the United States has no specific disclosure regulations regarding CSR and rather tends to rely on voluntary measures and market-driven approaches (Cicchiello et al., 2023). Against the background that these differences may influence the way companies implement CSR-linked compensation schemes, as well as the extent to which these mechanisms lead to symbolic versus substantive CSR engagement, the separate analyses of U.S. and European firms aim to explore whether the regulatory contexts drive the results. Surprisingly, the regressions show no differences in their main results – apart from the moderating effect of board busyness, which was negative and significant at the 1% level for U.S. companies and also negative but only significant at the 5% level for European firms. Due to the lack of significant differences, we refrain from explicitly including the two additional regression tables and consider it sufficient to summarize the results, as done above.

Table E-5: Regression results

	Dependent variable								
	CSR-washing (model 1)	**Green-washing (model 2)**	**Social-washing (model 3)**	**CSR-washing (model 4)**	**Green-washing (model 5)**	**Social-washing (model 6)**	**CSR-washing (model 7)**	**Green-washing (model 8)**	**Social-washing (model 9)**
CSR-linked compensation	12.378***	8.979***	10.504***	43.141***	56.001***	49.562***	14.925***	14.703***	13.676***
	(10.12)	(10.80)	(9.88)	(4.72)	(9.06)	(6.25)	(6.34)	(9.20)	(6.68)
CSR-linked compensation x Board attendance				-0.348***	-0.532***	-0.442***			
				(-3.39)	(-7.67)	(-4.97)			
CSR-linked compensation x Board busyness							-2.394	-5.380***	-2.981*
							(-1.27)	(-4.19)	(-1.81)
Board attendance	0.193***	0.218***	0.195***	0.381***	0.505***	0.434***	0.197***	0.226***	0.200***
	(3.13)	(5.20)	(3.65)	(4.60)	(9.03)	(6.04)	(3.19)	(5.42)	(3.73)
Board busyness	3.817***	3.613***	3.070***	3.905***	3.749***	3.183***	5.246***	6.825***	4.850***
	(3.82)	(5.31)	(3.53)	(3.91)	(5.55)	(3.67)	(3.48)	(6.67)	(3.70)
Board skills	-0.067**	-0.007	-0.031	-0.064**	-0.002	-0.027	-0.066**	-0.005	-0.030
	(-2.12)	(-0.32)	(-1.13)	(-2.03)	(-0.10)	(-0.99)	(-2.09)	(-0.22)	(-1.08)
Board size	0.382*	0.484***	0.200	0.367*	0.461***	0.182	0.374*	0.465***	0.190
	(1.86)	(3.47)	(1.12)	(1.80)	(3.33)	(1.02)	(1.82)	(3.34)	(1.07)
Board independence	0.088***	0.082***	0.087***	0.084**	0.076***	0.082***	0.088***	0.083***	0.087***
	(2.66)	(3.66)	(3.04)	(2.55)	(3.42)	(2.88)	(2.67)	(3.69)	(3.05)
Board structure	1.768	3.944***	2.594*	1.696	3.835***	2.503*	1.824	4.069***	2.664*
	(1.03)	(3.37)	(1.73)	(0.99)	(3.30)	(1.68)	(1.06)	(3.48)	(1.78)
Board diversity	0.391***	0.369***	0.415***	0.385***	0.359***	0.407***	0.388***	0.361***	0.410***
	(6.80)	(9.43)	(8.30)	(6.70)	(9.25)	(8.16)	(6.74)	(9.24)	(8.21)

t-statistics in parentheses are based on standard errors adjusted for heteroscedasticity and industry clustering
*** p<0.01, ** p<0.05, * p<0.1

	Dependent variable								
	CSR-washing (model 1)	**Green-washing (model 2)**	**Social-washing (model 3)**	**CSR-washing (model 4)**	**Green-washing (model 5)**	**Social-washing (model 6)**	**CSR-washing (model 7)**	**Green-washing (model 8)**	**Social-washing (model 9)**
CEO duality	6.686***	3.906***	7.390***	6.777***	4.044***	7.505***	6.649***	3.823***	7.344***
	(5.14)	(4.42)	(6.54)	(5.22)	(4.61)	(6.66)	(5.11)	(4.33)	(6.50)
Size	17.616***	6.769***	15.253***	17.733***	6.948***	15.401***	17.627***	6.794***	15.267***
	(15.99)	(9.04)	(15.93)	(16.11)	(9.34)	(16.12)	(16.00)	(9.09)	(15.95)
Age	1.633***	1.773***	1.751***	1.568**	1.674***	1.669***	1.638***	1.784***	1.756***
	(2.64)	(4.22)	(3.26)	(2.54)	(4.01)	(3.11)	(2.65)	(4.25)	(3.27)
EPS	-0.845***	-0.349***	-0.726***	-0.859***	-0.370***	-0.744***	-0.850***	-0.360***	-0.732***
	(-6.78)	(-4.12)	(-6.70)	(-6.90)	(-4.40)	(-6.88)	(-6.82)	(-4.25)	(-6.75)
ROA	90.745***	30.563***	85.362***	90.429***	30.080***	84.961***	91.398***	32.029***	86.175***
	(6.17)	(3.06)	(6.68)	(6.16)	(3.03)	(6.67)	(6.21)	(3.21)	(6.74)
Leverage	2.545	4.122*	2.954	2.371	3.857	2.734	2.550	4.134*	2.961
	(0.69)	(1.65)	(0.93)	(0.65)	(1.56)	(0.86)	(0.70)	(1.66)	(0.93)
Cashflow	1.954*	0.880	1.668*	1.943*	0.863	1.654*	1.972*	0.921	1.691*
	(1.75)	(1.16)	(1.72)	(1.74)	(1.14)	(1.71)	(1.76)	(1.21)	(1.74)
Constant	-533.758***	-272.322***	-469.395***	-551.895***	-300.044***	-492.421***	-536.049***	-277.471***	-472.248***
	(-35.39)	(-26.56)	(-35.81)	(-34.53)	(-27.77)	(-35.50)	(-35.29)	(-26.92)	(-35.78)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,217	4,217	4,217	4,217	4,217	4,217	4,217	4,217	4,217
Adjusted R-squared	0.470	0.391	0.446	0.471	0.400	0.449	0.470	0.394	0.446

t-statistics in parentheses are based on standard errors adjusted for heteroscedasticity and industry clustering
*** p<0.01, ** p<0.05, * p<0.1

E.4.3 Robustness checks

E.4.3.1 Reverse causality check

In all non-experimental research, there is always a concern that reverse causality may compromise the internal validity of statistical estimates (Antonakis et al., 2010). Although we use panel data in fixed-effects regression models – which allow insight into industry dynamics over time to eliminate unobserved heterogeneity and thus considerably reduce the risk of confounding (Allison, 2009; Wooldridge, 2010) – reverse causality may still threaten causal inference (Leszczensky and Wolbring, 2022). To address this concern, a common approach is the integration of a time-lagged version of the independent variable into the analysis, to assess whether past values of the independent variable predict current values of the dependent variable, hereby helping to determine the direction of causality (e.g. Aschhoff and Schmidt, 2008; Buch et al., 2013; Vergara, 2010). Following this approach, we reran our regression models using the one-year lagged version of the CSR-linked compensation variable. We chose a one-year lag, as CSR and particularly CSR-washing, which is characterized by an over-engagement in quickly implementable symbolic actions, are highly dynamic constructs that make a longer time lag unrealistic for capturing the effects of adopted CSR compensation schemes on them. The corresponding results are reported in Table E-6. Models 10, 11 and 12 show our baseline tests. In line with our previous results, we find significantly positive influences of the lagged CSR-linked compensation variable on CSR-washing, greenwashing, and social-washing at the 1% level. Moreover, the significant weakening effect of board attendance on the positive relationship between CSR-linked compensation and CSR-washing is further confirmed, as can be seen in models 13, 14 and 15. Finally, we find that the coefficient of the interaction between lagged CSR-linked compensation and board busyness is significant and negative at the 1% level for greenwashing (model 17) and at the 10% level for social-washing (model 18), while it is insignificant for CSR-washing (model 16), which is also consistent with our main results

Table E-6: Robustness test – lagged CSR-linked compensation variable

	Dependent variable								
	CSR-washing (model 10)	**Green-washing (model 11)**	**Social-washing (model 12)**	**CSR-washing (model 13)**	**Green-washing (model 14)**	**Social-washing (model 15)**	**CSR-washing (model 16)**	**Green-washing (model 17)**	**Social-washing (model 18)**
CSR-linked compensation t-1	12.264***	8.591***	10.018***	41.330***	58.283***	55.810***	14.218***	13.955***	13.009***
	(10.17)	(10.47)	(9.55)	(4.51)	(9.42)	(7.03)	(6.04)	(8.72)	(6.35)
CSR-linked compensation t-1 x Board attendance				-0.327***	-0.559***	-0.515***			
				(-3.20)	(-8.10)	(-5.82)			
CSR-linked compensation t-1 x Board busyness							-1.800	-4.943***	-2.756*
							(-0.97)	(-3.90)	(-1.70)
Board attendance	0.194***	0.220***	0.198***	0.354***	0.493***	0.450***	0.197***	0.227***	0.202***
	(3.16)	(5.26)	(3.71)	(4.47)	(9.22)	(6.55)	(3.20)	(5.44)	(3.78)
Board busyness	3.797***	3.613***	3.071***	3.870***	3.738***	3.186***	4.767***	6.276***	4.556***
	(3.80)	(5.31)	(3.53)	(3.87)	(5.53)	(3.68)	(3.36)	(6.52)	(3.70)
Board skills	-0.073**	-0.011	-0.036	-0.069**	-0.005	-0.030	-0.072**	-0.009	-0.034
	(-2.30)	(-0.51)	(-1.30)	(-2.20)	(-0.23)	(-1.10)	(-2.28)	(-0.40)	(-1.25)
Board size	0.379*	0.483***	0.199	0.366*	0.460***	0.178	0.371*	0.461***	0.187
	(1.85)	(3.46)	(1.12)	(1.79)	(3.32)	(1.00)	(1.81)	(3.31)	(1.05)
Board independence	0.084**	0.080***	0.084***	0.081**	0.075***	0.080***	0.084**	0.079***	0.084***
	(2.54)	(3.55)	(2.94)	(2.47)	(3.38)	(2.81)	(2.54)	(3.55)	(2.94)
Board structure	1.671	3.870***	2.507*	1.592	3.734***	2.382	1.717	3.997***	2.578*
	(0.97)	(3.30)	(1.67)	(0.92)	(3.21)	(1.60)	(1.00)	(3.41)	(1.72)
Board diversity	0.400***	0.377***	0.425***	0.393***	0.365***	0.413***	0.398***	0.371***	0.421***
	(6.98)	(9.66)	(8.51)	(6.86)	(9.42)	(8.31)	(6.93)	(9.50)	(8.43)

t-statistics in parentheses are based on standard errors adjusted for heteroscedasticity and industry clustering
*** p<0.01, ** p<0.05, * p<0.1

	Dependent variable								
	CSR-washing (model 10)	**Green-washing (model 11)**	**Social-washing (model 12)**	**CSR-washing (model 13)**	**Green-washing (model 14)**	**Social-washing (model 15)**	**CSR-washing (model 16)**	**Green-washing (model 17)**	**Social-washing (model 18)**
CEO duality	6.739***	3.949***	7.441***	6.822***	4.092***	7.572***	6.725***	3.911***	7.420***
	(5.18)	(4.46)	(6.58)	(5.25)	(4.66)	(6.72)	(5.17)	(4.43)	(6.56)
Size	17.650***	6.809***	15.301***	17.798***	7.061***	15.533***	17.663***	6.843***	15.320***
	(16.03)	(9.08)	(15.97)	(16.16)	(9.49)	(16.26)	(16.04)	(9.15)	(15.99)
Age	1.644***	1.774***	1.751***	1.581**	1.666***	1.652***	1.642***	1.770***	1.749***
	(2.66)	(4.22)	(3.26)	(2.56)	(3.99)	(3.08)	(2.66)	(4.22)	(3.25)
EPS	-0.851***	-0.354***	-0.732***	-0.867***	-0.382***	-0.757***	-0.855***	-0.366***	-0.739***
	(-6.82)	(-4.18)	(-6.75)	(-6.95)	(-4.53)	(-7.01)	(-6.85)	(-4.32)	(-6.81)
ROA	90.614***	30.442***	85.217***	90.774***	30.716***	85.470***	91.231***	32.135***	86.162***
	(6.17)	(3.04)	(6.66)	(6.18)	(3.09)	(6.71)	(6.20)	(3.22)	(6.73)
Leverage	2.288	3.924	2.721	2.086	3.579	2.403	2.263	3.856	2.683
	(0.62)	(1.57)	(0.85)	(0.57)	(1.45)	(0.76)	(0.62)	(1.55)	(0.84)
Cashflow	1.845*	0.812	1.589	1.820	0.770	1.551	1.859*	0.851	1.611*
	(1.65)	(1.07)	(1.63)	(1.63)	(1.02)	(1.60)	(1.66)	(1.12)	(1.66)
Constant	-530.791***	-270.840***	-467.732***	-547.271***	-299.015***	-493.697***	-532.514***	-275.573***	-470.372***
	(-35.09)	(-26.31)	(-35.54)	(-34.29)	(-27.71)	(-35.65)	(-34.96)	(-26.63)	(-35.51)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,217	4,217	4,217	4,217	4,217	4,217	4,217	4,217	4,217
Adjusted R-squared	0.470	0.390	0.445	0.471	0.400	0.449	0.470	0.393	0.445

t-statistics in parentheses are based on standard errors adjusted for heteroscedasticity and industry clustering
*** p<0.01, ** p<0.05, * p<0.1

E.4.3.2 Alternative measures

To ensure the robustness of our results, we conducted further additional analyses. In particular, we used alternative proxies for CSR-washing, greenwashing, and social-washing to account for the different varieties of discrepancy between symbolic and substantive actions. Our original measure of CSR-washing can be considered a higher-order construct as it relates to a company's broader, overarching, and strategically-oriented CSR measures to reflect symbolic commitments. In our robustness test, we are keen to explore whether the results also hold for a more granular and detailed measure that aligns more closely with specific commitments in certain CSR domains, rather than the overall CSR strategy. We thus measure the discrepancy between firms' enacted CSR policies and CSR controversies that arise from areas covered by these policies. CSR policies are powerful instruments for demonstrating that a company takes its responsibilities seriously and is actively working to enhance its performance in these areas. However, their effectiveness largely relies on the company's willingness to live up to the claims issued; otherwise, they are merely symbolic CSR actions. Thus, CSR policies are also characterized by the fact that they have the potential to improve corporate CSR performance, but do not automatically do so.

Similar to previous studies (e.g. Ioannou et al., 2023; Kassinis et al., 2022), we create our CSR policy scores by proceeding as follows: one of the authors and another CSR expert, who was not further involved in the project, independently evaluated the 424 data points included in Refinitiv's subcategories of the environmental and social dimension to determine whether they pertain to a declared policy. The subcategories of the environmental dimension include 'emissions' and 'resource use', with a total of 182 data points, while the social dimension comprises the subcategories 'workforce', 'human rights', 'community', and 'product responsibility', with a total of 242 data points. We eliminated all sector-specific data items, as they are only valid for a small proportion of the sample and would therefore distort the policy scores (e.g. 'Does the company have a policy in place to protect the health and well-being of animals that are raised in an agricultural setting to produce labor and commodities such as meat, eggs, milk, fur, leather, and wool?'). For the assessment of the remaining data points, we adopted a strict approach and excluded all items that were based on vague or unclear survey questions to ensure the precision of our score, e.g. 'Does the company describe, claim to have or mention…?' or 'Does the company report or show to be ready to…?'. Differing evaluations by the two assessors were discussed on a case-by-case basis, but only appeared in few cases, which led us to an inter-coder reliability of 89%. The final list of included data points is shown in Table E-7.

Table E-7: Final list of data items for the policy score

Policy items	Description	Scale
Environmental		
Policy Emissions	Does the company have a policy to improve emission reduction?	Yes/No
Resource Reduction Policy	Does the company have a policy for reducing the use of natural resources or to lessen the environmental impact of its supply chain?	Yes/No
Policy Water Efficiency	Does the company have a policy to improve its water efficiency?	Yes/No
Policy Energy Efficiency	Does the company have a policy to improve its energy efficiency?	Yes/No
Policy Environmental Supply Chain	Does the company have a policy to include its supply chain in the company's efforts to lessen its overall environmental impact?	Yes/No
Social		
Health and Safety Policy	Does the company have a policy to improve employee health & safety within the company and its supply chain?	Yes/No
Training and Development Policy	Does the company have a policy to support the skills training or career development of its employees?	Yes/No
Policy Diversity and Opportunity	Does the company have a policy to drive diversity and equal opportunity?	Yes/No
Policy Child Labor	Does the company have a policy to avoid the use of child labor?	Yes/No
Policy Forced Labor	Does the company have a policy to avoid the use of forced labor?	Yes/No
Policy Human Rights	Does the company have a policy to ensure the respect of human rights in general?	Yes/No
Policy Freedom of Association	Does the company describe, claim to have or mention the processes in place to ensure the freedom of association of its employees?	Yes/No
Policy Fair Competition	Does the company describe in the code of conduct that it strives to be a fair competitor? (includes respecting other company's patents, copyrights or intellectual properties or avoiding anti-competitive behavior, price fixing or other monopolistic tactics)	Yes/No
Policy Bribery and Corruption	Does the company describe in the code of conduct that it strives to avoid bribery and corruption at all its operations?	Yes/No
Policy Business Ethics	Does the company describe in the code of conduct that it strives to maintain the highest level of general business ethics?	Yes/No
Policy Community Involvement	Does the company have a policy to improve its good corporate citizenship?	Yes/No
Policy Customer Health and Safety	Does the company have a policy to protect customer health & safety?	Yes/No
Policy Data Privacy	Does the company have a policy to protect customer and general public privacy and integrity?	Yes/No

To calculate the CSR policy score, we first coded each data point as 1 or 0, depending on whether or not the firm installed the respective policy. Subsequently, we divided the actual number of adopted environmental/social policies by the maximum number of adoptable environmental/social policies and multiplied the result by 100. This approach ensures that the 'environmental policy score' and 'social policy score' range between 0 and 100. Finally, we averaged both scores to arrive at the CSR policy score. Based on these policy scores, we computed the *alternative CSR-washing* score, as well as the *alternative greenwashing* and *alternative social-washing* scores, by subtracting the CSR/environmental/social controversy

scores from our main analysis from the respective policy scores. We relied on our previously calculated controversy scores because Refinitiv does not provide a detailed breakdown of its environmental controversies into subcategories, making it impossible to determine a 1:1 discrepancy between environmental policies and environmental controversies. To ensure a uniform approach, we proceeded in the same way for both dimensions.

The regression results for the alternative CSR-washing, greenwashing, and social-washing scores are provided in Table E-8. In line with our previous findings, the effect of CSR-linked executive compensation on more granular CSR-washing activities is positive and statistically significant ($\beta = 4.715$, $p < 0.01$, model 19). Moreover, the separate examination of the influence on greenwashing ($\beta = 4.547$, $p < 0.01$, model 20) and social-washing activities ($\beta = 4.098$, $p < 0.01$, model 21) also shows significant positive results, thereby underscoring our hypothesis 1. In terms of the moderation analyses, the coefficient of the interaction term between CSR-linked compensation and board attendance is not significant for CSR-washing and social-washing, but significantly negative for greenwashing ($\beta = -0.375$, $p < 0.01$, model 23). Similarly, board busyness only exerts a significantly weakening effect on the influence of CSR-linked compensation on greenwashing activities ($\beta = -4.726$, $p < 0.01$, model 26), but not on overall CSR-washing and social washing.

Given that a direct matching of social controversies to social policies was possible within the Refinitiv data extracts, we calculated a further additional measure for social-washing. Specifically, we first assigned the controversy items to the corresponding policy items and then coded the controversy items as 0 or 1, signifying the presence (or not) of a controversy. We then summed the controversy data points for each category, divided them by the maximum number of potential controversy categories, multiplied the results by 100, and then subtracted it from 100 to ensure the correct value for the discrepancy calculation. Lastly, we subtracted this new controversy score from the policy score to arrive at the extra social-washing score. The regression results are the same as for the alternative social-washing score. Therefore, in the interest of concision, we did not explicitly include them.

Table E-8: Robustness test – alternative measures for CSR-washing, greenwashing and social-washing

	Dependent variable								
	alt. CSR-washing (model 19)	**alt. Green-washing (model 20)**	**alt. Social-washing (model 21)**	**alt. CSR-washing (model 22)**	**alt. Green-washing (model 23)**	**alt. Social-washing (model 24)**	**alt. CSR-washing (model 25)**	**alt. Green-washing (model 26)**	**alt. Social-washing (model 27)**
CSR-linked compensation	4.715***	4.547***	4.098***	12.445**	37.665***	4.745	4.899***	9.579***	3.744**
	(6.13)	(5.76)	(5.42)	(2.16)	(6.40)	(0.84)	(3.31)	(6.31)	(2.57)
CSR-linked compensation x Board attendance				-0.088	-0.375***	-0.007			
				(-1.36)	(-5.68)	(-0.12)			
CSR-linked compensation x Board busyness							-0.173	-4.726***	0.333
							(-0.15)	(-3.88)	(0.28)
Board attendance	0.083**	0.164***	0.051	0.130**	0.366***	0.055	0.083**	0.171***	0.050
	(2.15)	(4.12)	(1.33)	(2.50)	(6.88)	(1.07)	(2.15)	(4.32)	(1.32)
Board busyness	1.184*	1.738***	0.958	1.207*	1.833***	0.960	1.288	4.559***	0.759
	(1.89)	(2.70)	(1.55)	(1.92)	(2.85)	(1.55)	(1.36)	(4.70)	(0.81)
Board skills	-0.063***	-0.015	-0.068***	-0.062***	-0.012	-0.068***	-0.063***	-0.013	-0.068***
	(-3.16)	(-0.72)	(-3.46)	(-3.13)	(-0.57)	(-3.45)	(-3.16)	(-0.63)	(-3.47)
Board size	-0.018	0.395***	-0.035	-0.021	0.380***	-0.035	-0.019	0.378***	-0.034
	(-0.14)	(2.99)	(-0.28)	(-0.17)	(2.89)	(-0.28)	(-0.14)	(2.86)	(-0.27)
Board independence	0.031	-0.019	0.047**	0.030	-0.023	0.047**	0.031	-0.019	0.047**
	(1.52)	(-0.91)	(2.32)	(1.47)	(-1.11)	(2.31)	(1.52)	(-0.89)	(2.32)
Board structure	1.828*	3.964***	1.769*	1.813*	3.901***	1.768*	1.832*	4.067***	1.762*
	(1.68)	(3.55)	(1.65)	(1.67)	(3.51)	(1.65)	(1.69)	(3.65)	(1.65)
Board diversity	0.243***	0.286***	0.209***	0.241***	0.279***	0.209***	0.242***	0.279***	0.210***
	(6.72)	(7.70)	(5.90)	(6.68)	(7.55)	(5.89)	(6.71)	(7.53)	(5.90)
CEO duality	3.958***	-0.324	4.660***	3.980***	-0.229	4.662***	3.956***	-0.396	4.665***
	(4.85)	(-0.39)	(5.80)	(4.88)	(-0.27)	(5.80)	(4.84)	(-0.47)	(5.81)

t-statistics in parentheses are based on standard errors adjusted for heteroscedasticity and industry clustering
*** p<0.01, ** p<0.05, * p<0.1

	Dependent variable								
	alt. CSR-washing (model 19)	**alt. Green-washing (model 20)**	**alt. Social-washing (model 21)**	**alt. CSR-washing (model 22)**	**alt. Green-washing (model 23)**	**alt. Social-washing (model 24)**	**alt. CSR-washing (model 25)**	**alt. Green-washing (model 26)**	**alt. Social-washing (model 27)**
Size	10.356***	4.859***	9.561***	10.387***	4.992***	9.564***	10.357***	4.874***	9.560***
	(14.86)	(6.79)	(13.94)	(14.90)	(7.00)	(13.94)	(14.86)	(6.82)	(13.94)
Age	1.065***	1.369***	1.002***	1.049***	1.299***	1.000***	1.066***	1.379***	1.001***
	(2.74)	(3.43)	(2.62)	(2.70)	(3.27)	(2.62)	(2.74)	(3.46)	(2.62)
EPS	-0.509***	-0.143*	-0.517***	-0.512***	-0.158**	-0.518***	-0.509***	-0.152*	-0.517***
	(-6.49)	(-1.77)	(-6.71)	(-6.53)	(-1.97)	(-6.71)	(-6.49)	(-1.89)	(-6.70)
ROA	55.938***	19.077**	50.392***	55.906***	18.937**	50.389***	55.982***	20.280**	50.307***
	(6.03)	(2.00)	(5.52)	(6.03)	(2.00)	(5.52)	(6.03)	(2.13)	(5.51)
Leverage	-3.690	0.578	-4.004*	-3.738	0.373	-4.008*	-3.690	0.594	-4.005*
	(-1.60)	(0.24)	(-1.77)	(-1.62)	(0.16)	(-1.77)	(-1.60)	(0.25)	(-1.77)
Cashflow	3.518***	2.799***	3.266***	3.513***	2.779***	3.265***	3.519***	2.839***	3.263***
	(4.99)	(3.86)	(4.71)	(4.98)	(3.85)	(4.70)	(4.99)	(3.93)	(4.70)
Constant	-328.273***	-198.235***	-304.491***	-332.844***	-217.823***	-304.874***	-328.436***	-202.691***	-304.177***
	(-34.51)	(-20.29)	(-32.53)	(-32.98)	(-21.09)	(-30.69)	(-34.29)	(-20.63)	(-32.27)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205	4,205
Adjusted R-squared	0.459	0.349	0.432	0.460	0.354	0.432	0.459	0.352	0.432

t-statistics in parentheses are based on standard errors adjusted for heteroscedasticity and industry clustering
*** p<0.01, ** p<0.05, * p<0.1

E.5 Discussion and conclusion

E.5.1 Discussion

The inclusion of CSR targets in executive compensation has become a rapidly spreading trend in corporate governance over recent years. Initially introduced to reduce discretion and align executive decision-making with stakeholder demands, the often broadly-defined targets themselves open up discretionary powers and raise questions about their usefulness in achieving truly meaningful CSR improvements. Against this background, the objective of the current paper is twofold: first, we aim to shed light on the effectiveness of CSR-linked executive compensation by analysing its influence on companies' CSR-washing activities; and second, we strive to provide evidence on how boards' monitoring commitments, as reflected in board meeting attendance and board busyness, affect this relationship. Based on a sample of S&P 500 and Stoxx Europe 600 companies, covering the period from 2017 to 2021, we find that firms implementing CSR-linked executive compensation are associated with higher levels of CSR-washing, as well as greenwashing and social-washing. Moreover, our results suggest that these positive influences are significantly weakened by higher board meeting attendance rates and partly by higher board busyness. Overall, our findings provide four important insights into the dynamics of CSR-linked executive compensation and its actual impact on CSR initiatives.

First, and probably most importantly, they demonstrate that CSR-linked compensation elements in their current form are not effective in fostering genuine CSR advancements. Instead, they tend to incentivize an over-investment in symbolic actions and claims – within all CSR dimensions – to which companies fail to live up. This finding is consistent with our baseline hypothesis, as well as with the findings of Berrone and Gomez-Mejia (2009a) and Maas (2018), who could not identify positive effects of environmental/CSR compensation targets on general environmental/ CSR performance. However, it contradicts several other studies that showed positive relationships between such compensation schemes and companies' CSR activities (e.g. Cavaco et al., 2020; Flammer et al., 2019; Hong et al., 2016; Khenissi et al., 2022). Given that these studies largely relied on aggregated CSR scores of major rating agencies, which are characterized by several limitations and also include many symbolic CSR measures, we do not perceive our results to be in classic contradiction to their findings, but rather to provide much-needed clarification. Overall, the evidence of the ineffectiveness of CSR-related compensation suggests that it presents another governance mechanism that is primarily adopted as a reaction to external pressures, rather than as an instrument to substantially improve performance (Berrone and Gomez-Mejia, 2009b; Kolk and Perego, 2014; Luoma and Goodstein, 1999). With CSR becoming more important every year, various stakeholders are increasingly demanding

stronger commitments to sustainable practices (Maas, 2018). By integrating CSR targets into their executives' pay structure, compensation committees respond to these pressures, signal their dedication to CSR matters, and appear to take the right steps to foster valuable progress (Berrone and Gomez-Mejia, 2009a). However, the failure to successfully achieve substantive CSR improvements clearly illustrates that the target setting within such contracting is not done thoroughly, paving the way for executives to engage in opportunistic behaviour – in particular, pursuing symbolic actions to create a pseudo CSR commitment. Consequently, this means that while the linkage between compensation and CSR targets does have the potential to foster substantial CSR performance, it does not automatically do so and thus becomes a CSR-washing tool itself.

Second, our results show that higher board meeting attendance significantly weakens the positive relationship between CSR-linked compensation and CSR-washing/greenwashing/social-washing, hereby emphasising the importance of directors' attendance at board meetings to the effective fulfilment of their monitoring responsibilities. This finding confirms our expectation that higher meeting attendance leads to better monitoring and is in line with several other studies that show positive effects of meeting attendance on boards' monitoring effectiveness in other contexts (e.g. Chou et al., 2013; DeBoskey et al., 2019; Liu et al., 2016). Also interesting to mention in this vein is that some researchers who examined the dynamics between executive compensation and board monitoring suggest that both mechanisms may act as substitutes within a governance framework (e.g. Armstrong et al., 2010; Rediker and Seth, 1995). Specifically, these authors observed a trade-off, proposing that the need for intense board monitoring diminishes when executives receive effective incentives. In terms of CSR incentives, our results clearly show that CSR compensation contracting is not effective and that board monitoring is highly needed as a complement to such compensation incentives to lower executives' self-serving behaviour.

Third, our findings indicate that the positive relationship between CSR-linked compensation and social-washing, and particularly between CSR-linked compensation and greenwashing, is weaker when board busyness is higher. This finding contradicts our expectation that busier board members perform less effectively in monitoring because of their heavy workloads and increased distractions. Instead, it suggests that board members with multiple directorships may have a higher awareness and sensitivity to the problems of green-/ and social-washing – as well as the negative consequences associated with them – due to their greater diversity of experience and insights gained from other corporate environments. Overall, this is consistent with previous

studies showing that busy directors are beneficial to boards' monitoring responsibilities in other areas (e.g. Elyasiani and Zhang, 2015; Field et al., 2013; Rapp et al., 2018).

Fourth, the robustness analyses, in which we used the more granular measures of our CSR-washing variables, showed a significant weakening effect of board attendance and board busyness only for the relationship between CSR-linked compensation and greenwashing. For CSR- and social-washing, the results were not significant. Considering that our alternative measures focus on topic-related CSR policies as symbolic CSR actions, while substantive CSR actions are still measured based on CSR controversies, these findings suggest that boards' monitoring of policy compliance primarily targets adherence to environmental policies. We have two potential explanations for this effect. First, the higher focus on environmental policy compliance may be due to the fact that environmental issues, compared to social issues, usually have higher public visibility, which leads to higher pressures and public scrutiny in these areas (Flammer, 2013; Sisco et al., 2021). Second, the generally stricter and more specific legal requirements for environmental aspects (Fan et al., 2019; Murshed et al., 2021), which are associated with higher fines and are often directly integrated into corporate policies, may serve as an extra motivation to closely monitor compliance with these policies.

E.5.2 Implications for theory and practice

Our findings contribute to the literature in three primary ways. First, we contribute to the literature on CSR-linked executive compensation because this study is, to the best of our knowledge, the first to explore the influence of CSR-linked compensation on CSR-washing activities. While the debate on the effectiveness of such compensation schemes is not new, prior studies primarily explored this question by analysing the influence of CSR-related remuneration on firms' overall CSR performance. Our analysis, however, shifts attention to its potential role in fostering deceptive CSR practices, specifically, detrimental CSR-washing. This shift expands our knowledge by not only providing evidence for the ineffectiveness of CSR-linked compensation, but also by highlighting its exploitability for opportunistic purposes. Thus, it adds a new dimension to the discourse on executive compensation and corporate CSR efforts. Second, we contribute to the growing body of literature on board governance by showing that board meeting attendance and board busyness may mitigate the negative effect of inadequately designed compensation incentives on opportunistic managerial behaviour. These findings emphasize the important role of these factors in enhancing the effectiveness of board monitoring, thereby further enriching the understanding of the dynamics within board governance. Third, we contribute to the literature on CSR-washing by introducing a new

measurement that specifically targets the dark side of CSR-washing – detrimental CSR-washing – by capturing the discrepancy between a company's engagement in symbolic CSR actions and its involvement in CSR controversies. Previous measures have predominantly focused on the mismatch between CSR talk and CSR walk in terms of overall CSR performance. These measures thus reflect the varieties of CSR-washing that, while misleading, are not necessarily entirely harmful to society. With our new measure, we facilitate a more nuanced differentiation between harmful and primarily misleading types of CSR-washing, thereby addressing calls for greater specificity in the understanding of CSR-washing phenomena (e.g. Lyon and Montgomery, 2015).

Our findings also hold practical implications. Above all, they show that CSR-linked compensation schemes in their current form appear to incentivize management to engage in higher levels of CSR-washing, thereby failing to meet their real objective of aligning managerial decision-making with stakeholder demands. In order to substantially promote and improve CSR performance, it is therefore of high importance that compensation committees considerably revise their compensation contracting and focus more intensively on setting appropriate CSR targets that limit executives' discretionary powers in their implementation. In particular, this means that they should avoid using overarching CSR objectives and instead concentrate on integrating quantitative, hard targets that allow for easy verification of achievement. In case of qualitative targets, it is important to ensure that they are as controllable, clear, and objective as possible (see also Maas, 2018) to reduce exploitation of symbolic CSR measures. It is only through such precise and accountable targets that CSR-linked compensation schemes can achieve their true objective and serve as effective governance tools. Moreover, our findings highlight the importance of board meeting attendance and board busyness for a more effective monitoring function. Companies should thus make efforts to improve attendance at board meetings, e.g. by thoroughly determining meeting frequencies or installing extrinsic incentives such as share ownership, to align the interests of board members with those of the company more closely. In terms of board busyness, it seems promising to appoint some board members who hold further directorships, as the board can benefit from their wider knowledge and benchmarking experiences. Lastly, our finding that boards' monitoring of policy compliance only works effectively for the environmental dimension implies that boards should improve their oversight and understanding of social policies. This could include deepening their knowledge of social issues to ensure a better balance between the environmental and social aspects of CSR, and developing more robust mechanisms to assess and enforce compliance with social policies.

E.5.3 Limitations and future research directions

While our study contributes valuable insights, it is important to acknowledge its limitations, which offer opportunities for future research endeavors. First, we focus our analysis exclusively on large listed companies in Europe and the United States. By basing the study on the companies listed in the S&P 500 and Stoxx Europe 600 indices, we aim to construct a sample that is as representative as possible of the most influential companies within Western developed nations. However, the geographic and index-specific focus limits the generalizability of our findings to a broader global context and across different kinds of firms. Future research could expand the scope to include companies from other regions and of different sizes, thereby contributing to a more comprehensive understanding of how different institutional constraints, resource availabilities, and regional effects influence our results. Second, we cannot completely rule out the possibility of a potential endogeneity problem in our analysis. We performed robustness checks, carefully controlled for relevant governance variables and firm characteristics that are known to influence CSR-washing, and also included lagged compensation measures to mitigate concerns regarding potential problems of reverse causality and simultaneity. Yet, we cannot completely eliminate the possibility that some omitted variables might impact the observed results. Thus, a challenge for future research is to find appropriate instrument variables with broad validity to address this issue. Third, we use a dummy variable to measure CSR-linked compensation, which certainly cannot capture all the complexities of executive remuneration. Against the background that our study presents an initial exploration of a potentially new phenomenon – specifically, the impact of CSR-linked compensation on CSR-washing, a topic that, to the best of our knowledge, has not been previously investigated – we believe it is appropriate to employ a straightforward measure to first examine whether any relationship exists. As we find support for an association, future research should extend these findings by using more detailed measures that account for different compensation elements, as well as the concrete amounts of compensation linked to CSR performance. Moreover, it would be particularly interesting to examine whether different designs of CSR targets in performance-linked bonuses, e.g. quantitative vs. qualitative, exert different effects on CSR-washing behaviour. Finally, we use CSR data from the Refinitiv Eikon database to construct our CSR-washing variable. Lately, Refinitiv has been harshly criticised for constantly and surreptitiously rewriting its data, resulting in altered CSR scores that show positive relationships with stock market performance (Berg et al., 2021). Given that these alterations primarily apply to the environmental and social dimension, and largely originate from the way the CSR data is combined into scores rather than changes to the raw data itself, we avoid using aggregated

environmental and social scores and instead only rely on governance scores, as well as self-constructed variables based on raw data extracts. Although we are confident that this approach helps to overcome Refinitiv's data weaknesses, future research that replicates our study using other sources for collecting CSR data is vital to ensure the robustness of our findings.

E.6 References Section E

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F Discussion and conclusion

F.1 Summary of research findings

The aim of this dissertation is to shed light on how executives use the discretionary powers associated with CSR to shape their firms' CSR profiles. To pursue this goal, this dissertation comprises four research papers, each of which tackles a different sphere of the overall research question.

The first paper provides a systematic literature review on the current state of research regarding the impact of CEO-related determinants on CSR activities and performance. The main finding of the analysis is robust support for upper echelon theory, which states that the psychological traits, experiences, and values of top management are pivotal in determining key organizational decisions, actions, and outcomes (Hambrick and Mason, 1984). Numerous studies have investigated aspects such as CEOs' personality traits, beliefs, values, and experiences, consistently finding that these factors exert a considerable effect on firms' CSR activities and performances (*RQ 1-1*). In terms of the employed CSR measures, the review reveals that the vast majority of current research relies on CSR scores from major rating agencies (*RQ 1-2*). Given that these ratings are frequently criticized due to their subjective rating processes, interpretable data sources and questionable aggregations (Bouten et al., 2017; Capelle-Blancard and Petit, 2017; Entine, 2003), as well as more recently for dubious calculations regarding connected parties (Li et al., 2023; Tang et al., 2022), the predominance of such scores underlines the call for more diverse data sources and measures in future research. A third key finding of the analysis is that almost two thirds of the included studies focused purely on U.S. samples, which considerably limits the generalizability of the results. In fact, the detailed analysis even revealed that some of the included studies relied on identical samples and measures, raising concerns about the diversity and representativeness of the research in this field and emphasizing the need for broader, more varied geographic sampling in future studies to close this important research gap (*RQ 1-3*).

The second paper of this dissertation explores the moderating effect of CEO reputation management on the relationship between firm size and CSR performance, as well as CSR controversies. The results show that CEOs' reputational ambitions do not exert a significant moderating effect on the positive relationship between firm size and CSR performance (*RQ 2-1*) but do exert a significant weakening effect on the positive relationship between size and CSR controversies (*RQ 2-2*). These findings hold true for both general CEO reputation management as well as CEOs' specific CSR-related reputation management. Overall, the results suggest that

CEOs of large companies who are actively engaged in building and maintaining their reputations tend to focus more on avoiding CSR scandals rather than investing in positive CSR contributions. The significant weakening effect on CSR controversies is as expected, since any type of controversy is associated with reputation losses for the respective company and, subsequently, the CEO who endeavours to maintain a good reputation. However, the insignificant effect on CSR performance is rather interesting. Considering that CSR itself is widely understood as a reputation-enhancing tool, primarily by attracting positive reactions from stakeholders and investors (e.g. Pérez et al., 2020; Serafeim and Yoon, 2022), it is intriguing that CEOs concerned about their reputation do not further enhance it. The fact that these CEOs nevertheless present themselves as particularly CSR-conscious on LinkedIn implies that they deliberately use the information asymmetries within CSR and social media's unverified nature to create and benefit from perceptions of heightened CSR commitment, which may not accurately reflect their companies' actual CSR performance. Overall, this strategy allows them to navigate public pressure and stakeholder scrutiny without significant engagements in CSR initiatives, thereby also decreasing any potential financial risks associated with CSR investments (Barnea and Rubin, 2010), but with a sole aim on controversy avoidance. Given that adequate CSR performance involves more than avoiding scandals, such approaches are not holistic.

Paper 3 examines the transparency and reporting practice of ESG controversies in corporate reports within the textile and pharmaceutical industry. The analysis is performed along the four core elements of transparency and offers important insights. In terms of the preferred reporting medium (*RQ 3-1*), the analysis revealed that companies tend to disclose only explosive ESG controversies associated with ongoing media attention in their sustainability reports, while controversies with expected or pending litigation were disclosed only once in the annual reports' legal proceedings section. All other ESG controversies were not addressed, resulting in about a quarter of controversies not being reported at all. Regarding the quality of the controversy disclosure (*RQ 3-2*), both industries showed the highest level of detail in the description of ESG controversies that have been covered in the media for a comparatively long time, despite these controversies being less severe than others that had shorter media coverage and lower reporting quality. Finally, neither the application of sustainability reporting standards (*RQ 3-3*) nor independent assurance (*RQ 3-4*) appeared to have a positive impact on the likelihood of ESG controversy disclosure, although sustainability standards explicitly demand such disclosures, and balanced reporting – as a component of corporate accountability – should presumably be verified through external audits. Overall, these findings demonstrate that

management only discloses what they are practically forced to disclose, either due to legal obligation from financial reporting or due to high public attention, indicating that controversy reporting is not done out of a desire to proactively inform stakeholders or to present a balanced picture of their ESG situation, but rather to save legitimacy (in line with Boiral, 2013). The fact that only the hot-topic controversies were published in sustainability reports further shows that management primarily pursues a self-laudatory sustainability communication. By selectively reporting, they aim to minimize negative information in these reports, suggesting that sustainability reports are predominantly used as marketing tools rather than as vehicles for transparent communication. As selective disclosures are widely understood as a greenwashing technique (e.g. Lyon and Maxwell, 2011; Marquis et al., 2016), this behaviour can be interpreted as a deliberate effort to mislead stakeholders. And this is further compounded by the pseudo-transparency and -credibility achieved through the application of sustainability reporting standards and external assurance, which are in reality only incompletely applied (in line with Michelon et al., 2015; Moneva et al., 2006; Talbot and Boiral, 2018) or executed in an unreliable manner (in line with Boiral et al., 2019a; Talbot and Boiral, 2018). All in all, it can thus be concluded that management does not provide a transparent picture of their firms' ESG situation within corporate reporting.

The fourth research paper analyses the influence of CSR-linked executive compensation on CSR-washing activities and how boards' monitoring commitments moderate this relationship. The results show that CSR-linked executive compensation is associated with significantly higher levels of CSR-washing, as well as greenwashing and social-washing (*RQ 4-1*). This finding indicates that the current form of compensation elements linked to CSR performance are not effective, as they incentivize executives to over-invest in quickly realisable, symbolic CSR actions and claims to which the companies fail to live up, rather than effectively promoting substantive improvements. Given that previous studies largely showed positive influences of such compensation schemes on CSR scores (e.g. Cavaco et al., 2020; Flammer et al., 2019; Khenissi et al., 2022), Paper 4 presents an important clarification of these results. Overall, the ineffectiveness of CSR targets in compensation suggests that they are primarily adopted as a reaction to growing stakeholder demands regarding corporate CSR commitment and as a signal of dedication to CSR matters, as opposed to being an instrument to substantially enhance CSR performance (Berrone and Gomez-Mejia, 2009b; Kolk and Perego, 2014; Luoma and Goodstein, 1999). This suggests that CSR-linked compensation itself is used as a CSR-washing instrument. In terms of the moderating effect of boards' monitoring commitments, the further analyses reveal that the positive relationship between executives' CSR-linked compensation

and CSR-washing is significantly weakened by higher board meeting attendance rates (*RQ 4-2*) and partly by higher board busyness (*RQ 4-3*). The weakening effect of board meeting attendance underscores the critical role that directors' presence at board meetings plays in effectively meeting their monitoring obligations, which is in line with findings from prior research (e.g. Chou et al., 2013; DeBoskey et al., 2019; Liu et al., 2016). The significant effect of board busyness, on the other hand, suggests that board members holding multiple directorships may possess increased awareness and sensitivity to the issues of greenwashing and social-washing, as well as the associated negative outcomes, given their broader range of experiences and perspectives acquired from various corporate settings. This finding is consistent with other studies that have demonstrated the benefits of busy directors (e.g. Elyasiani and Zhang, 2015; Field et al., 2013; Rapp et al., 2018).

Taken together, the findings of the four distinct research papers provide nuanced insights into the way executives use the discretionary powers associated with CSR to shape their firms' CSR profiles. The first paper generally underscores the significant role of CEOs' psychological traits, values and experiences in determining CSR activities and performances, highlighting how personal characteristics and motivations at the executive level not only influence CSR, but often shape it as a tool to meet their own needs and goals. This is complemented by the second paper, which reveals that CEOs' reputational ambitions, as a moderator of the firm size – CSR link, do not necessarily translate into actual, improved CSR performance, but rather into strategies aimed at avoiding controversies while simultaneously staging increased CSR awareness on social media to benefit from positive stakeholder perceptions. This approach highlights executives' tactical use of CSR, which focuses more on the appearance of social responsibility in public forums rather than on substantial, impactful CSR actions. The third paper reveals a similar approach in terms of CSR reporting. In particular, it shows that management pursues a selective reporting strategy regarding ESG controversies, prioritizing reputation and legitimacy concerns over transparent disclosure. Such practices are indicative of CSR-washing and highlight managements' tendency to use CSR disclosures as a marketing tool rather than a means of genuine accountability. Finally, the fourth paper focuses on the effectiveness of CSR-linked compensation as a governance mechanism to explicitly align executives' CSR-related decision-making with stakeholder expectations. However, the results demonstrate that executives exploit the often broadly-defined CSR targets of such compensation schemes to over-engage in symbolic CSR measures and claims to which the companies fail to live up, again underscoring the use of CSR as a tool for image rather than substantive change. Collectively, these studies thus indicate that while executives have considerable discretion in shaping their

firms' CSR profiles, this discretion is largely exercised in ways that prioritise corporate image and personal reputation over genuine CSR engagement and transparency, revealing significant shortcomings in the efficacy of current CSR practices and the need for more rigorous governance, regulation and accountability mechanisms.

F.2 Contribution and implications

This dissertation contributes to the literature in several ways. First, it enriches upper echelon, legitimacy and agency theory. In particular, the findings of Paper 2 contribute to upper echelon theory by showing that CEOs' reputational ambitions, as reflected in their reputation management, may mitigate the negative influence of a contextual factor on firms' CSR controversy involvement. Furthermore, the findings of Paper 3 enrich legitimacy theory by demonstrating that management only discloses ESG controversies that are subject to high media attention or expected litigation, which indicates that such reporting is primarily a response to external pressures rather than a genuine effort to provide a balanced and transparent picture of their activities. Finally, in terms of agency theory, this dissertation as a whole shows that executives use the information asymmetries and discretionary powers within CSR to pursue their own interests, which often focus on corporate image and personal reputation gains over engaging in substantive CSR actions, thereby contradicting long-term interests of shareholders and stakeholders and revealing a crucial misalignment in the principal-agent relationship.

Second, this dissertation contributes to research on CSR performance. Specifically, it adds to the literature on CEOs' impact on CSR performance by providing a comprehensive synthesis of the current state of research, highlighting CEO drivers that significantly influence firms' CSR as well as identifying important research gaps and shortcomings in previous studies that should be addressed in future research endeavours. Moreover, it sheds light on the so far underexplored influence of CEO reputation management as a behavioural driving force of CSR, thereby extending the range of individual-level drivers examined beyond the predominantly studied surface-level characteristics such as age, gender and education. Focusing on these more specific characteristics highlights their importance as influential determinants of CSR that merit further investigation.

Third, this dissertation enriches the body of literature focusing on CSR reporting and specifically on the disclosure of negative CSR aspects. This research stream is particularly enhanced through an in-depth analysis of the ESG controversy disclosure in the pharmaceutical and textile industry, which has been missing thus far, as well as a comparison of actual controversies with company-reported controversies, which provides more comprehensive

insights into reporting transparency. Additionally, Paper 3 highlights the inadequacy of companies' compliance with sustainability reporting standards like the GRI, challenging the perception of these standards as quality markers of ESG communication and pointing out their potential misuse in camouflaging controversial incidents. Lastly, it contributes to the debate concerning the effectiveness of sustainability assurances in sustainability reporting by demonstrating its failure to verify disclosures of negative ESG contributions.

Fourth, this dissertation adds to the literature on CSR-washing by introducing a novel measurement that particularly focuses on detrimental CSR-washing. This new measure contributes to a more nuanced differentiation between harmful and merely misleading types of CSR-washing and thereby responds to calls for greater specificity in understanding these phenomena. Moreover, it highlights the use of selective controversy disclosure and CSR-linked executive compensation as tools for CSR-washing purposes.

Fifth, this dissertation extends the corporate governance literature by shedding light on the role of CSR-linked executive compensation – an increasingly utilised governance instrument (e.g. Glass Lewis, 2023) – in fostering CSR-washing activities, a previously unexplored area. This finding broadens the existing knowledge by not only providing evidence of the ineffectiveness of current CSR-linked compensation schemes but also by highlighting its potential misuse for opportunistic purposes. Furthermore, the results show that board meeting attendance and board busyness can mitigate the negative impacts of such compensation schemes on managerial behaviour, thereby providing further insights into effective board governance practices. Finally, the findings also emphasize that compensation incentives and board monitoring should be understood as complements (Derchi et al., 2021) rather than substitutes (Armstrong et al., 2010; Rediker and Seth, 1995) in a governance system.

This dissertation also holds several practical implications. Most importantly, it demonstrates that more explicit regulation is needed for CSR reporting. Appropriate regulatory guidelines could mitigate several of the problems identified within this dissertation. First, by providing clear requirements for the content and format of sustainability reports, including specific guidance on materiality assessments, regulation would foster more transparent, reliable and comparable disclosures, which contribute to decreasing information asymmetries between stakeholders and managers. Overall, this could reduce the discretionary power of executives within CSR and limit their ability to engage in CSR-washing as well as misleading social media presentations, thus enhancing the overall integrity and authenticity of corporate CSR commitments and leading to a more truthful representation of companies' actual CSR engagement and performance. In addition, clear regulation could support executives in gaining

a better understanding of the concept of CSR in general and how to incorporate and implement respective considerations into their strategic and operational decision-making and processes (Boiral and Henri, 2017). Lastly, regulation would provide a solid framework for auditors, enabling them to assert more influence over the inclusion of critical aspects in reports, potentially limiting selective disclosures and making respective audits more effective. To date, the most comprehensive regulation of CSR reporting is the European Union's new Corporate Sustainability Reporting Directive (CSRD), which entered into force on 5th January 2023 and is applicable for the first time in the 2024 financial year. Given that its original exposure draft underwent significant weakening after stakeholder consultations, the CSRD's effectiveness remains to be seen. Overall, however, such progressive reporting regulations are immensely needed to drive more genuine and impactful corporate sustainability efforts.

In the absence of appropriate regulation, effective governance mechanisms become crucial to address the challenges associated with executives' discretion on CSR. In this regard, this dissertation shows that CSR-linked compensation schemes, in their current form, tend to encourage management to engage in higher levels of CSR-washing, rather than to align managerial decisions with stakeholder demands. Given that such compensation schemes nevertheless have the potential to genuinely enhance CSR performance, this dissertation's findings suggest that compensation committees must revise compensation contracting with a critical lens, focusing on setting precise CSR targets that limit executive discretion. This involves avoiding overarching CSR goals in favour of quantifiable, verifiable targets, and ensuring qualitative targets are controllable, clear, and objective (Maas, 2018) to minimize the use of symbolic CSR measures. Additionally, the importance of board meeting attendance and board busyness is underscored for better monitoring quality and mitigation of executives' opportunistic behaviour. Companies should therefore try to enhance board meeting attendance, possibly through effective scheduling or extrinsic incentives like share ownership, and consider appointing some directors with multiple directorships to leverage their broader knowledge and benchmarking experiences.

F.3 Limitations and future research

Like any research, this dissertation is not without limitations, which offer opportunities for future research. First, limitations connected with the employed methodologies are acknowledged. Paper 1 uses a systematic literature review approach as proposed by Fink (2010). Despite aiming for objectivity by adhering to a systematic and structured analysis process, certain limitations are evident due to the selection of databases and keywords, as well

as an exclusive focus on English-language articles. Future research that encompasses a wider range of databases, another set of keywords, and includes non-English articles could provide a valuable extension to the current review. Paper 2 conducts regression analyses using a cross-sectional data sample, a methodology often criticized for its higher risk of potential endogeneity issues (Spector, 2019). While the application of an instrumental variable approach could be a solution to this problem, identifying an appropriate instrumental variable within the available data sources was not successful. However, theoretical considerations suggest that reverse causation, where a firm's CSR performance influences its size, is less probable when CEO reputation management acts as a moderator, which already helps to ease some endogeneity concerns. Nonetheless, future research that relies on panel data would be helpful to improve the knowledge of the causal connections. Paper 3 employs a conceptual content analysis to derive implications from ESG controversy disclosures in pharmaceutical and textile companies. Due to its qualitative nature and the implementation of a two-coder approach, the final sample of analysed companies is relatively small when compared to the total number of companies within these industries. Future research could extend the findings by relying on quantitative research approaches, potentially benefiting from algorithm-based analyses, that allow for larger sample sizes to achieve more robust results. Such approaches would enable a broader examination of ESG controversies across these sectors and even beyond, enhancing the generalizability and depth of the findings. In Paper 4, panel regression analyses are used to examine the impact of CSR-linked executive compensation on CSR-washing. Despite conducting several robustness checks, controlling for relevant governance variables and firm characteristics known to influence CSR-washing, and incorporating lagged compensation measures to address potential issues of reverse causality and simultaneity, the complete elimination of the impact of omitted variables on the observed results cannot be guaranteed. Consequently, a key challenge for future research lies in identifying appropriate instrumental variables with broad validity to effectively address this limitation and enhance the reliability and depth of the conclusions drawn from the results.

Second, in terms of the samples examined, the empirical studies (Papers 2 to 4) concentrate explicitly on listed companies from Western developed countries. This focus is chosen due to the higher visibility and stakeholder scrutiny associated with listed companies in general, and the considerable global influence that these companies typically have, particularly in setting trends and standards in CSR practices and CSR-washing phenomena. Nevertheless, this focus also limits the generalizability of the results to a wider global context and across diverse types of companies. Future research that broadens this scope to incorporate firms from other regions,

and of different sizes and types, would contribute to a more comprehensive understanding of how different resource availabilities, institutional constraints, and regional dynamics influence the findings.

Third, regarding the data sources used, the CSR data for the research papers was largely retrieved from the Refinitiv Eikon database. Major CSR rating agencies, including MSCI, Refinitiv, Sustainalytics or Bloomberg, are generally criticized for their subjective rating processes, interpretable data sources and questionable aggregations (Bouten et al., 2017; Capelle-Blancard and Petit, 2017; Christensen et al., 2022; Entine, 2003). Refinitiv Eikon, however, has recently been accused of rewriting its data on an on-going, unannounced basis, leading to positive relationships between CSR scores and stock market performance that were absent in the original data (Berg et al., 2021). Given that these alterations primarily apply to the environmental and social dimension, and largely originate from the way the CSR data is combined into scores rather than changes to the raw data itself, Paper 3 and 4 intentionally avoid using aggregated environmental and social scores and instead solely rely on governance scores as well as raw data extracts to overcome this weakness. Data in Paper 2, however, were collected before these issues were public and may therefore suffer from the biased scores, highlighting a potential limitation in the reliability of its conclusions. Overall, future research should replicate the studies using different data sources to ensure the robustness and completeness of the findings.

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