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Talking is Silver, Doing is Gold? – The Influence of Corporate Social Responsibility on Corporate Financial Performance

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Abstract

Sustainability has become an omnipresent topic in the media and public as well as private debate. Stakeholders see the responsibility to promote sustainability with companies, pressuring them to increase their Corporate Social Responsibility (CSR). The relationship between CSR, being a means to satisfy a firm's stakeholders, and Corporate Financial Performance (CFP) is extensively debated in academics. This thesis contributes to this debate and tries to overcome measuring inaccuracies of previous studies by strictly categorizing CSR activities into CSR communication and CSR commitment. A total of 656 annual and CSR reports were examined, and variables representing these CSR activities were carefully and elaborately created, resulting in, among other things, a CSR communication breadth index, as well as an accurate assessment of communication quantity. A panel data analysis on European firms across industries over the observation period of eight years was conducted. The results reveal that only CSR communication has an influence on CFP. While standalone CSR reports and communication breadth have a positive influence, high levels of communication quantity have a negative effect.

Keywords: Corporate Social Responsibility; corporate financial performance; CSR commitment; CSR communication; stakeholder theory.

1. Introduction

1.1. Topic, relevance and research question

Microsoft aims to be carbon negative by the year 2030[1], BlackRock has a $60 billion platform of dedicated sustainable investment solutions[2], and McDonald's has done the previously unthinkable and launched a "McVegan"[3]. These are just a few examples of sustainable commitments that firms have communicated recently. Sustainability issues like climate change, the energy system transformation, gender equality, or the overexploitation of natural resources are gaining more and more public attention (Rockstrm et al., 2009; Rosen & Sellers, 1999). The responsibility of promoting sustainability lies no longer only with politics, but also the business world. The actions of companies have, therefore, increasingly attracted the attention of stakeholder groups (Joyner & Payne, 2002). Companies face high pressure from various stakeholders to conduct their business in an ethical manner (Elias, 2004). This pressure has made it clear to companies that they must adapt their practices to keep their stakeholders satisfied (Muller & Kräussl, 2011). Many companies recognize this necessity and have increased their commitment to CSR (Shahzad & Sharfman, 2017). Stakeholders are not only demanding more commitment to CSR but are also increasingly asking for companies to provide more information about how they are managing their CSR commitments (Sroufe & Gopalakrishna-Remani, 2019). The annual reporting of exclusively financial information does no longer suffice for stakeholders, and they expect firms to also disclose detailed non-financial information about the firm's activities and operations (Bernardi & Stark, 2018; Cormier & Magnan, 2014; Haque, 2017). Firms have met this growing demand for information on CSR activities by increasingly conducting and publishing CSR reports (Berliner & Prakash, 2015; García-Sánchez, Hussain, Martínez-Ferrero, & Ruiz-Barbadillo, 2019).

Both the increased commitment to CSR and the reporting

[1] https://news.microsoft.com/climate/

[2] https://www.blackrock.com/corporate/sustainability

[3] https://www.mcdonalds.com/de/de-de/product/big-vegan-ts-2560.html

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on it comes at a considerable price for companies, as these CSR activities are time and resource consuming. It would, therefore, seem as if CSR is merely a significant cost factor that companies accept to avoid the anger of stakeholders (Chiu & Sharfman, 2011). But could there be more to it than just bowing to social pressure? Might there be an economic interest in the engagement in CSR activities for firms?

For decades now, the relationship between CSR and CFP has received considerable academic attention. However, the results of the numerous studies addressing this topic are still inconclusive (Baboukardos, 2018; Cahan, De Villiers, Jeter, Naiker, & Van Staden, 2016; Cahan et al., 2016; Clarkson, Fang, Li, & Richardson, 2013). Meta-analyses of earlier research found that there is an overall positive relationship between CSR and CFP (Margolis & Walsh, 2003; Orlitzky, Schmidt, & Rynes, 2003), however, there is still an overwhelming amount of studies whose results differ considerably. Consequently, the debate on the link between CSR and CFP is far from over. (Shahzad & Sharfman, 2017) Research supporting the notion of a positive relationship between CSR and CFP argues that CSR is a way of managing and, therefore, improving a firm's relationships with its stakeholders. These relationships are said to positively influence CFP, mainly through the generation of a trustworthy image and a good reputation. A good reputation among many different stakeholder groups can positively influence CFP in various ways. Meeting the ethical standards of customers can improve brand reputation, which will subsequently increase brand loyalty and sales (Bird, Hall, Momentè, & Reggiani, 2007; Singal, 2014). Research has also shown that good corporate reputation attracts more talent and boosts employee morale, which, in turn, improves productivity (Coldwell, Billsberry, Van Meurs, & Marsh, 2008; Shafer, Smith, & Linder, 2005). Upholding a high moral standard also lowers the risks of lawsuits being filed against a firm, the implementation of additional regulations, and, therefore, the related costs (Karpoff, Lott, & Wehrly, 2005; Russo & Fouts, 1997). Research has also shown that long-term CSR provides insurance-like benefits to companies in and after times of crisis (Shiu & Yang, 2017). Neglecting the relationships with stakeholders, on the other hand, can have serious consequences for firms, as stakeholders provide resources to the company which influence its economic viability and efficiency (Donaldson & Preston, 1995).

CSR reporting is a way for companies to report on their CSR commitment to their stakeholders in a targeted and controlled manner. In doing so, the demands of the stakeholders can be addressed in a manner that presents the company in a favorable way. CSR reporting also helps a firm establish awareness and a reputation on the stock market (Liesen, Figge, Hoepner, & Patten, 2017; L. Wang & Tuttle, 2014). Analysts appreciate CSR disclosures because they provide more transparency and reduce the information asymmetry between companies and financial market participants (Bernardi & Stark, 2018; Dhaliwal, Radhakrishnan, Tsang, & Yang, 2012). Publishing CSR information, therefore, attracts the attention of analysts, thus, making the firm's stocks a more attractive investment to the other market participants. Transparent companies are also considered to be a less risk-prone, making them a preferred investment option for many (Alexander & Buchholz, 1978; Spicer, 1978).

However, the increase in CSR reporting does not always promote transparency. Some researchers have criticized that CSR commitment does not always keep pace with the increase in CSR communication, resulting in a communication-behavior gap. If stakeholders recognize this discrepancy, it can lead to a loss of reputation for the company. This gap does not necessarily have to be consciously created by the company. However, since CSR reporting is one way of improving the company's image to the outside world, this gap can also be a calculated strategy for concealing low-level CSR commitment. In both cases, however, it is clear that CSR commitment and CSR communication should not be considered to be the same thing.

The present work addresses some of the weaknesses of previous research and tries to overcome measurement inaccuracies of such intangible activities like CSR. Previous research has not made a clear distinction between CSR commitment and CSR communication so that the evaluation of CSR commitment has often been based on CSR communication. This thesis emphasizes the clear differentiation of both activities and treats them separately. Thus, CSR commitment is only considered as such if it has been evaluated independently from external resources.

This thesis aims to shed light on the influence of both CSR communication and CSR commitment on the financial performance of companies. Therefore, the following research questions will be addressed in this work:

Do CSR commitment and CSR communication separately influence CFP, and do these effects differ in their direction and strength? Or simply put, does it really pay to be good, or does a company just have to present itself well?

To investigate these research questions, an analysis with a complex data collection from 656 annual and CSR reports of 49 European companies from various industries over an observation period of eight years was performed. Based on this data, clearly defined variables were constructed. Hence, CSR communication was not only measured by the quantity of reporting but also by the breadth of the content of this communication. To ensure accuracy, the exact number of words of the CSR reporting of each company for each year was worked out.

In addition, the main part of this work focused on developing an index to measure the breadth of a company's CSR communication. Little existing research has dealt with the content of CSR reporting in such depth.

Furthermore, CFP was evaluated from an accounting as well as a stock market perspective. Because of this, shareholders were examined separately, and also distinguished from the rest of the stakeholders in this thesis, even though they technically belong to the groups of stakeholders.

The accurate and specific definition, creation, and use of these variables represents the impactful contribution of this thesis to present research in the field of CSR. The results offer not only important theoretical implications but also reveal practical implications, valuable to firms that are attentive to their stakeholders' moral attitudes.

During the implementation of the main study, it became apparent that further relevant and interesting information could be extracted from the data. Therefore, two followup studies were conducted. The first followup study aimed to clarify whether the communication of different CSR topics also has a different influence on CFP. The second followup study specifically addressed the problem of the communication-behavior gap. The aim was to find out whether certain companies show discrepancies between their CSR commitment and their CSR communication and whether, and if so, how this has an impact on CFP.

1.2. Structure and chapter outline

At the beginning of the following chapter, essential concepts of CSR are defined. This is followed by the introduction of stakeholder theory as the theoretical basis of this thesis. Subsequently, the connection between this theory, CSR, and CFP is described. In this course, the hypotheses are derived. Afterwards, the risk of a communication-behavior gap, arising from discrepancies between the levels of CSR commitment and CSR communication, is addressed. The third chapter deals with the data used for the subsequent regression analysis. It is explained where and how the data was collected and how the final sample was obtained. This is followed by a description of how the dependent, independent, and control variables were created, and why these specific variables were chosen. Subsequently, the choice of the models for the regression analysis is explained. In chapter four, the regression results are presented. As the potential of the available data did not yet appear to be satisfactorily exhausted, two followup studies were conducted. The method behind these studies and their results are presented in chapter five. The results of the main study, as well as the followup studies, are then extensively discussed in the sixth chapter. In this general discussion, explanations for the findings of the studies are provided. This work concludes with its limitations, which simultaneously present opportunities for future research, and some theoretical as well as practical implications. The final chapter of this thesis contains a brief conclusion of all of the preceding, emphasizing some final and reflected thoughts.

2. Theoretical foundation and hypotheses

In order to get a comprehensive overview of the relationship between CSR and CFP, the following chapter provides a broad theoretical background. The chapter starts with the definition of the most important concepts. In the next step, the theoretical basis of this thesis, the stakeholder theory, will be explained. Subsequently, and on the basis of this theory, the relationship between CSR and CFP will be discussed. During this course, the hypotheses of this thesis will be derived.

2.1. CSR concepts and definitions

2.1.1. Sustainability

To set a basis for the following definitions, it is essential that the concept of "sustainability" is explained first. This concept was first introduced in "The World Conservation Strategy" report in 1980 (IUCN, UNEP, & WWF, 1980). In 1987, it was further debated in the Brundtland Report at the World Commission on the Environment of the United Nations (UN), where it was described as "development that meets the needs of the present generation, without compromising the ability of future generations to meet their own needs" (United Nations, 1987, p. 13). In the field of sustainable development, this conceptualization of sustainability has received wide recognition and application. Since the Brundtland Report was released, many new definitions of sustainability have emerged and must number in the hundreds (Vos, 2007). A term that has received great attention and which conceptually seems to be the basis of most definitions of sustainability is the „Triple Bottom Line" (Elkington, 2004). This framework represents the three pillars of sustainability: economic, social, and environmental considerations (Barkemeyer, Holt, Preuss, & Tsang, 2014). The three elements form a relationship should reinforce and support one another (Vos, 2007). Often, the social dimensions of sustainability have not been given the same importance as economic benefits (Remmen, 2007). The intangible nature of ethical and social benefits might be an explanation for this behavior (Sroufe & Gopalakrishna-Remani, 2019). It has been argued that social and environmental sustainability cannot be separated (Brundtland, 1987).

2.1.2. Sustainable Development Goals

In order to promote sustainability in developing and industrial countries, the General Assembly of the UN developed a new Agenda for Sustainable Development, the Sustainable Development Goals (SDGs), which consist of 17 goals and 169 targets and were agreed upon and passed in 2015. The SDGs, much like their predecessor the Millennium Development, are a universal set of goals, indicators, and targets which were introduced at the Rio +20 Conference. The SDGs are building on the Millennium Development Goals (MDGs), which were set in 2000. The SDGs expanded the MDGs' agenda and included further issues such as sustainable consumption, innovation, and climate change. This set of goals is at the heart of the 2030 Agenda, acting as a universal agenda and serving as "a shared blueprint for peace and prosperity for people and the planet, now and into the future" for UN member states to use to frame their agendas and policies (United Nations, n.d.). These goals aim to end poverty, improve health and education, reduce inequality, and increase economic growth while preserving the world's oceans and forests to tackle climate change (United Nations, 2016). The overall goal of this framework is to ensure prosperity for all and to protect the planet for future generations. The governments, businesses, and civil society of all countries are required to actively work on achieving these goals by the year

2030 (Hoque, Rahman, Molla, Noman, & Bhuiyan, 2018). Businesses are one of the stakeholder groups this agenda is aimed at. Their proactive engagement is needed to attain the SDGs, and they have been urged to incorporate these targets into their CSR strategy (García-Sánchez et al., 2019).

2.1.3. CSR

There is an abundance of definitions of CSR whose content has continuously evolved (Argandoña & von Weltzien Hoivik, 2009; Maak, 2008). The fact that the dynamics of the discussion on CSR are permanently influenced by the continually changing topics that are of particular relevance to society makes it all the more difficult to grasp a static definition of the term. Many of the existing definitions agree on certain points regarding the core features of CSR. CSR involves voluntary actions to promote a social good, which are not just following existing regulations in the countries the firm operates in but go beyond the interests of a company and legal requirements (McWilliams & Siegel, 2000; Rodriguez-Fernandez, 2016). It is about companies incorporating economic, social, and environmental impacts into their operations. This can include a variety of adjustments like environmentally friendly production, employee satisfaction, respect for local communities, consideration towards investors, and general ethical behavior (Bénabou & Tirole, 2010). The Commission of the European Communities, therefore, very fittingly defines CSR as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" (Commission of the European Communities, 2002, p. 3).

2.1.4. CSR reporting

A firm's reports containing its sustainability-related information can take many names, such as "CSR reports", "Sustainability Reports", or "Citizenship Reports" (Roca & Searcy, 2012). Not only the name but also the definitions for the concept of CSR reporting vary considerably. The definition of the World Business Council for Sustainable Development (WBCSD) has often been used as a representative example. They define CSR reports as "public reports by companies to provide internal and external stakeholders with a picture of the corporate position and activities on economic, environmental and social dimensions" (WBCSD, 2003). CSR reports are, therefore, non-financial reports containing information on the economic, social, and environmental impacts of a firm's operations. This sets them apart from environmental reports, which, as the name suggests, only contain information on the actions of companies that are in some form related to the environment. CSR reports provide a more comprehensive overview of the non-financial aspects of a company's managerial strategies and decisions, giving information on the company's values, governance, and social goals. (Berthelot, Coulmont, & Serret, 2012) These reports can either be integrated publications or take the form of a standalone report (Daub, 2007; Schaltegger, Bennett, & Burritt, 2006).

As CSR reporting is voluntary in most jurisdictions, mandatory requirements regarding these publications are mostly absent. The increased use of CSR reports made researchers aware that the development of standards and guidelines for the creation of such reports is essential. Corporations have, therefore started to use reporting guidelines, like the guidelines created by the Global Reporting Initiative (GRI) (GRI, 2011), as an orientation in the development of their CSR reports. These guidelines enhance the comparability of CSR reports and are a way of reducing the cost of conducting the reports (Berthelot et al., 2012). Considering that the use of these guidelines is voluntary as well, it seems like firms have a lot of freedom when it comes to creating their CSR reports (Searcy & Buslovich, 2014). Some progress has been made concerning the regulation of non-financial disclosure. As a result of the EU's initiative on CSR, the 2013 Accounting Directive was amended. Companies with more than 500 employees or a public listing are required to disclose non-financial information on environmental, social, and employee matters as well as their respect for human rights, anti-corruption, bribery, and corporate diversity. This only started to be mandatory for reports published in 2018, covering the fiscal year of 2017-2018. (Cheng, Ioannou, & Serafeim, 2014; Schulz & Kourkoulas, 2014)

2.2. CSR and CFP

2.2.1. Shareholder theory

After reviewing the extant literature, it became apparent that stakeholder theory is the most appropriate theory to provide a rationale to the research question of this thesis. The concept of stakeholder theory has been brought forward by Freeman (Freeman, 1984). Stakeholder theory, as an integrative and holistic perspective, has become the most prominent theoretical foundation in CSR research (Carroll, Brown, & Buchholtz, 2017; Montiel & Delgado-Ceballos, 2014; Perrini & Tencati, 2006; Weber & Marley, 2012). Conducting business does not simply take place between two single actors. A lot of additional stakeholders are involved who play crucial roles in a firm's success (Schaltegger, Hörisch, & Freeman, 2019). Freeman defines stakeholders as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman, 1984, p. 46). Ackoff (1974) adds the notion of legitimacy and clarifies that stakeholders are a group that the firm needs in order to exist. The underlying premises of stakeholder theory are rather intuitive. A company is in relationships with many stakeholder groups, and a firm has obligations to the members of these groups. The stakeholder theory differs from traditional theories in the sense that it takes the view that financial value creation is not the sole focus of a firm. Therefore, while stakeholder theory still considers shareholders to be one of those interest groups, it does not consider them to be the most important one (Hörisch, Freeman, & Schaltegger, 2014). The stakeholder theory views a firm's relationships with all its stakeholders as a crucial component of its management strategy and believes that those relationships should

Figure 1: Overview of the Sustainable Development Goals, Source: United Nations

be considered in important managerial decisions (Searcy & Buslovich, 2014). These relationships with stakeholders are considered to be crucial to the functioning of a firm (Freeman, 1984, 2010), and in order to understand how a company functions, it is important to understand how these relationships work and change. Achieving and pertaining to this understanding is the job of the executives. They have to manage and shape these relationships in a way that creates the most value for their company (Freeman, 1984). It would be impossible to operate a business if the relationships with internal and external stakeholders were not robust (Freudenreich, Lüdeke-Freund, & Schaltegger, 2019). According to stakeholder theory, all stakeholders have to be acknowledged and satisfied as the dissatisfaction of any stakeholder group can hurt a firm's legitimacy in society and, consequently, its survival (Clarkson, 1995; Freeman, 1984).

According to Donaldson and Preston (1995), all stakeholder theory research can be classified based on three theoretical branches: descriptive, normative, and instrumental. The descriptive branch of stakeholder theory illustrates the nature of firms, as well as how their managers behave (Donaldson & Preston, 1995). The normative branch deals with the morality of the behavior of firms and their managers. The instrumental branch investigates the influence of the behavior of firms and managers on a firm's performance (T. M. Jones, 1995). To summarize, the three branches address the following questions: What are firms doing with respect to stakeholder relationships? What should firms do when dealing with their stakeholders? How does a firm's adherence to stakeholder management principles affect its performance? (T. M. Jones, 1995; Laplume, Sonpar, & Litz, 2008)

Although these branches of stakeholder theory are of a complementary nature (Donaldson, 1999), instrumental stakeholder theory provides the best theoretical basis for this thesis. The instrumental branch of stakeholder theory combines the stakeholder concept with economic theory, ethics, and findings from behavioral science (T. M. Jones, 1995). It highlights the relationship between stakeholder management and a corporation's traditional economic objectives, like CFP. Manager must fulfill the interests of stakeholders, economic or otherwise, in order to encourage them to participate in activities which create value for the corporation. (Laplume et al., 2008) Therefore, a connection between stakeholder management and CFP is assumed in research. In their influential article on this theory, Donaldson and Preston (1995) argue that corporations whose managers successfully establish stakeholder practices and principles and therefore manage their relationships with their stakeholders properly can achieve superior CFP over time (Donaldson & Preston, 1995; Freeman, 1984). Successfully managing stakeholder relationships may, therefore, result in competitive advantages (Barnett & Salomon, 2006). These relationships a firm has with its stakeholders have been described metaphorically as "contracts" (T. M. Jones, 1995). A firm could, therefore, be considered as a „nexus of contracts between the firm and its stakeholders (Jensen & Meckling, 1976). These contracts, like the contract between a firm and the community it is placed in, are not specific, formal, or in any way described in a document. Much like with real people, a firm is seen as a more desirable contracting partner when it shows a strong moral fiber, or at least shares the same moral values as its potential contracting partner. A way for stakeholders to get an idea of the moral tendencies of firms is the firm's reputation. Further, its policies and decisions, as well as the way it is directly dealing with its stakeholders, reflect this (Frank, 1988). Some of these policies and decisions are more visible to stakeholders than others, depending on if they directly or indirectly affect the stakeholders. Needless to say, all of them will influence the firm's reputation among its shareholders. Fostering a moral culture and acting morally as a firm can improve corporate reputation, as well as help restrain opportunistic behavior among employees. Therefore, it can reduce agency, as well as transaction costs. Therefore, good ethics do not hinder profitability, but can lead to more and better relationships and consequently to better business. (T. M. Jones, 1995)

2.2.2. CSR commitment and CFP

Instrumental stakeholder theory serves as an explanation of why companies feel the need to engage in CSR (Perrini & Tencati, 2006; Post, Preston, & Sachs, 2002; Van Marrewijk, 2003). Firms feel the growing pressure from the stakeholder side to act responsibly (Chiu & Sharfman, 2011). In order to maintain good relations with their stakeholders, companies must comply with this request. CSR, being time and resource consuming, comes at a financial cost for firms. According to instrumental stakeholder theory, profitability and CSR are not only not mutually exclusive, though. In order to achieve sustainable and superior CFP, firms have to align their corporate interests with appropriate CSR activities to satisfy their stakeholders (Davenport, 2000; Jain, Vyas, & Chalasani, 2016; Waddock & Graves, 1997). This point of view has sparked a long-lasting debate on the link between CSR and CFP, which has been the subject of academic research for decades now (Al-Tuwaijri, Christensen, & Hughes Ii, 2004; Anderson & Frankle, 1980; Belkaoui, 1976; Orlitzky et al., 2003). The results of these studies are contradictory, and there is much controversy surrounding the question of whether the correlation is positive, negative, or even existent. Some researchers find a negative relationship. They argue that CSR mainly produces additional costs, for example, from donating money to social causes like education, healthcare, and infrastructure, or from investing in environmentally friendly materials and machinery and customer service (Kapoor & Sandhu, 2010). Other studies (e.g., Abbott & Monsen, 1979; Griffin & Mahon, 1997; McWilliams & Siegel, 2000) have either found no or an inconclusive effect of CSR on CFP. The majority of studies, though, supports the hypothesis of a positive relationship between a company's CSR efforts and its financial performance (Flammer, 2015; Saeidi, Sofian, Saeidi, Saeidi, & Saaeidi, 2015). Therefore, this thesis will look at the relationship between CSR and CFP through the lens of instrumental stakeholder theory, arguing that CSR is an instrument used by companies to secure resources and support from stakeholder groups (T. M. Jones, 1995).

There are various ways in which this improved relationship with stakeholders can become apparent. Many of them can be associated with an improved reputation of the firm. Corporate reputation reflects the perception that stakeholders have of a company (Brammer & Pavelin, 2006). Showing a high degree of CSR commitment is a way of improving this reputation. Employees' knowledge capital, capabilities, and motivation are critical aspects that are engaged in the value creation in a company (Shafer et al., 2005). Studies have shown that a good corporate reputation can boost employee morale, leading to improved productivity and, consequently, better CFP (Basu & Palazzo, 2008; Brammer & Pavelin, 2006; Orlitzky et al., 2003; Pirsch, Gupta, & Grau, 2007). Companies with a higher sustainability reputation also attract and retain more talented employees as they feel like the companies match their ethical expectations better (Coldwell et al., 2008). Employing high skill workers is also likely to reduce the cost of quality management and the cost of production, which in turn will lead to improved CFP (Brown, Willis, & Prussia, 2000; Brown, 1996). Additionally, it has been shown that employees may even forgo financial benefits to work for a company with a superior CSR reputation (Sroufe & Gopalakrishna-Remani, 2019). Improving a company's social aspects like employee satisfaction, retention, and recruitment can minimize intra-firm conflicts between the duties and targets of different branches, departments, managers, shareholders as well as internal stakeholders (Wagner, 2007). Environmental and social philanthropy generates goodwill among stakeholders through positive publicity, resulting in a favorable public image (Ameer & Othman, 2012). This enhances loyalty among customers, as customers prefer the products of companies they deem conscious about their social and environmental responsibility (Creyer, 1997; Jacobs, Singhal, & Subramanian, 2010; Mohr & Webb, 2005). The projection of a socially responsible image also gives consumers the feeling of being able to evaluate a company better. At the same time, a good image also favorably affects the evaluation of products and services received (Rodriguez-Fernandez, 2016). Customers will buy a product if they feel like it meets their personal needs. This value of a product can also be symbolic (Freudenreich et al., 2019). CSR efforts can lead to better product image and, consequently, to higher sales and new market opportunities (Sroufe & Gopalakrishna-Remani, 2019). This superior corporate reputation can also prove to be valuable to a firm in case of crises, as it can help to protect the company against damage from possible negative future events (Bansal & Clelland, 2004; Godfrey, 2005; Godfrey, Merrill, & Hansen, 2009; Sharfman & Fernando, 2008).

Effective environmental management can have cost avoidance benefits as it can mitigate the risks of crises or regulation and the expenses associated with them (Reinhardt, 1999), as well as prevent the costs of lawsuits and legal settlements (Karpoff et al., 2005). The disregard of social responsibilities, however, might bring about further legislation, which can lead to higher costs of compliance (Russo & Fouts, 1997).

All of these described consequences of improved reputation among stakeholders can lead to higher CFP. In order for stakeholders to recognize real CSR commitment as such, it has to be externally and independently verified. Companies that can present such verification should benefit from these reputational advantages. Based on this, the following hypotheses were derived:

H_{1a}: Being awarded a high CSR score has a positive influence on accounting-based CFP.

H_{1b}: Being awarded a sustainability award has a positive influence on accounting-based CFP.

Shareholders also seem to appreciate high levels of CSR commitment, as they can also be linked to the better performance of a firm on the stock market. Borgers, Derwall, Koedijk, and Ter Horst (2015) showed that the stocks of companies with environmentally friendly practices generated higher returns than stocks of companies with a substandard environmental record. The social aspect of CSR seems to influence stock returns as well. Stocks of firms that scored high on diversity, community, human rights, and employee relations outperformed stocks of firms with low scores in this regard (Kempf & Osthoff, 2007).

In recent years, CSR has become an important indicator of business performance (T. Wang & Bansal, 2012). CSR is often seen as an indication of management skills by shareholders (Bowman & Haire, 1975). Displaying concern and awareness for social and environmental issues might be regarded as a skill that enables managers to run a functioning and maybe even superior company, making the company an attractive investment (Alexander & Buchholz, 1978). Investors are willing to pay a premium for the stock of companies that appear to be well-governed (Coombs & Holladay, 2011). External validation of this responsible management seems to be rewarded as Klassen and McLaughlin (1996) found that winning environmental awards entails positive stock returns for companies, whereas negative stock returns follow the occurrence of environmental crisis.

There has been a rise in socially responsible investments, which are a way of directing an investment fund in a way that aligns the financial objectives and the social commitments to social and environmental issues of investors. This trend began to take off in the 1970s, starting in the US, while slowly but steadily moving to Europe as well. (Haigh & Hazelton, 2004) Prominent fund managers have started to incorporate environmental, social, and governance (ESG) criteria into their portfolio selection methods (Oh, Park, & Ghauri, 2013). Financial decision-makers display strong preferences and a considerably higher willingness to pay for socially responsible investments. Also, this willingness to pay is much higher for investment products that have been certified to be responsible, compared to those with no certification. Investors who have indicated to follow certain psychological motives, norms, and values. Getting the feeling of doing good and serving a cause from making socially responsible prevails investors to forgo higher returns, which might have been otherwise achieved through the investment in unsustainable counterparts. (Gutsche & Ziegler, 2019)

In times of crisis, investors seem to feel safer with socially responsible investments. While the overall size of professionally managed assets stayed approximately the same during the last financial crisis from 2007 to 2010, SRI assets displayed a healthy growth (Oh et al., 2013). Being socially responsible has also shown to provide insurance-like benefits to a company when looking at the effects of legal actions that have been filed against it (Godfrey et al., 2009). A lack of CSR practices can discourage investors, as investing in such firms seems to be of higher risk (Alexander & Buchholz, 1978; Spicer, 1978).

Drawing from the presented findings in previous research, it can be argued that the external validation of high CSR commitment has a positive influence on the market-based financial performance of a firm. Consequently, two additional hypotheses are put forward:

H_{2a}: Being awarded a high CSR score has a positive influence on market-based CFP.

H_{2b}: Being awarded a sustainability award has a positive influence on market-based CFP.

2.2.3. CSR communication and CFP

There is not only an increase in the requests from stakeholders for more CSR commitment but also for more information about how companies manage their CSR (Sroufe & Gopalakrishna-Remani, 2019). Companies face pressure from various stakeholders to be transparent about their CSR commitment (Elias, 2004). It is expected of firms to disclose not only financial but also non-financial information about the firm's activities and operations (Cormier & Magnan, 2014; Haque, 2017). Consequently, many previously strictly financial reports now contain information about the CSR activities of the firm, or even standalone CSR reports are published (Rupley, Brown, & Marshall, 2012). Most of the largest companies in the world are reporting on their CSR commitments (KPMG, 2011). CSR reports are one of the most effective moralized communication tools (Castelló, Morsing, & Schultz, 2013; Hooghiemstra, 2000). They act as facilitators and help firms to respond to the demand for information from stakeholders. By fulfilling these expectations, firms can manage their perceived legitimacy (Hahn & Kühnen, 2013). Roberts (1992) described a significant relationship between the level of a company's disclosure levels and its economic performance. Similarly, Murray, Sinclair, Power, and Gray (2006) found a long-term relationship between high disclosure levels and economic performance within UK companies. CSR reporting of a firm is mostly aimed at gaining acceptance from its key stakeholders (Schaltegger et al., 2006). These disclosures can lead to customers choosing between what they perceive to be more or less socially and environmentally friendly products, or employees choosing organizations that seem to represent their values as their employer. This is why CSR disclosures can lead to a competitive advantage for companies that know how to construct them in their favor. (Matisoff, 2013) The debate about CSR has long been extended beyond environmental practices to a much wider variety of issues (Sroufe & Gopalakrishna-Remani, 2019). Therefore, in order to display a high degree of responsibility, a company must communicate on a wide range of CSR topics (Rodriguez-Fernandez, 2016).

Considering the findings of existing literature on stakeholders' perception of CSR reporting, visible, extensive, and broad CSR communication should have a positive influence on the financial performance of a company. Therefore, the following hypotheses were developed:

H_{3a}: Issuing a standalone CSR report has a positive influence on accounting-based CFP.

H_{3b}: A higher quantity of CSR reporting has a positive influence on accounting-based CFP.

H_{3c}: Addressing a broader range of CSR topics has a positive influence on accounting-based CFP.

This increasing trend of requests for CSR transparency can not only be observed from the stakeholders' side (Michelon, Rodrigue, & Trevisan, 2020). Financial market participants are on a constant quest for information that can be incorporated in their risk assessment of risks and decision-making processes (Malsch, 2013). Some studies find that analysts use CSR reports for preparing their recommendations, as this information reduces forecast dispersion (Cormier & Magnan, 2014; Dhaliwal et al., 2012; Ioannou & Serafeim, 2015). CSR disclosures enhance transparency and therefore reduce the information asymmetry between firms and their shareholders (Kolk & Perego, 2010). The availability of CSR information has also proven to improve analysts' forecast accuracy and to decrease forecast error (Bernardi & Stark, 2018).

CSR reporting also escalates awareness of the firm's existence in the financial market and among investors (Merton, 1986). CSR reporting helps in establishing a firm's reputation on the financial market (Liesen et al., 2017; L. Wang & Tuttle, 2014), as financial market participants use it to form their perception of the company in question (Cheng et al., 2014; Luo, Wang, Raithel, & Zheng, 2015; Sharfman & Fernando, 2008). Publishing CSR information attracts the attention of analysts, which will, in return, make the company more attractive to investors (Bernardi & Stark, 2018; Dhaliwal et al., 2012). Were all other factors to remain constant, it has been shown that investors would decide in favor of companies that supply information on their social responsibility (Rodriguez-Fernandez, 2016). There is a significant relationship between the degree of a company's CSR disclosure and the economic performance of a firm (Roberts, 1992). Studies (e.g., De Klerk, De Villiers, & Van Staden, 2015) have shown that higher levels of CSR disclosure are associated with higher share prices. Flammer (2015) found that investors are willing to pay more for the stocks of companies that displayed a higher degree of social responsibility. Investors have shown to accept lower expected returns on investments if those also pursue social objectives (Richardson & Welker, 2001).

In summary, the findings from the existing literature indicate that clearly visible, extensive, and broad CSR communication should also have a positive influence on the performance of a company on the stock market. Therefore, the following hypotheses are put forward:

H_{4a}: Issuing a standalone CSR report has a positive influence on market-based CFP.

H_{4b}: A higher quantity of CSR reporting has a positive influence on market-based CFP.

H_{4c}: Addressing a broader range of CSR topics has a positive influence on market-based CFP.

2.2.4. Risks of a communication-behavior gap

While companies face increased pressure from various stakeholder groups to act ethically and be transparent (Elias, 2004), the everincreasing amount of CSR information communicated has been a prominent target of criticism. Just as for any form of communication, credibility is essential for CSR reports (Jackob, 2008), and the lack of such credibility has been the root of this criticism (Dando & Swift, 2003). This is why CSR reports may not decrease perceived information asymmetry and facilitate dialogue with stakeholders but actually widen the credibility gap and therefore threaten a firm's legitimacy (Seele & Gatti, 2017). The increasing level of CSR disclosure is not always met with increased confidence but sometimes skepticism about the sincerity of the reported information (Dando & Swift, 2003; Doane & Potts, 2000). Companies are often accused of using CSR reporting to pursue calculated and strategic goals rather than to feel a real commitment to their stakeholders (Brown & Deegan, 1998; Deegan, Rankin, & Tobin, 2002). CSR can be used as impression management to boost a company's image (Hooghiemstra, 2000). External strategies can potentially give a corporation the appearance of being ethical, even if such a commitment does not exist (Laufer, 2003). Sometimes unsubstantiated disclosures are published in order to respond to pressures from the public or manage the public perception of the company (Adams, 2002; Hooks, Coy, & Davey, 2002). The content of CSR reports has also been harshly criticized as it seems like companies have too much freedom in choosing and altering the information they release (Coombs & Holladay, 2011; Fonseca, 2010). Firms can, therefore, choose which stakeholders to address and are able to deliver a positive and confident message to their target group (Fonseca, 2010; Milne & Gray, 2013). Inconsistencies between CSR reporting and a company's activities have made stakeholders al-most cynical towards CSR reporting and made them question the moral legitimacy of firms (Basu & Palazzo, 2008; Claasen & Roloff, 2012; Illia, Zyglidopoulos, Romenti, Rodríguez-Cánovas, & del Valle Brena, 2013). Academics have been concerned with the fact that reported performance and actual performance are not always the same (Morhardt, Baird, & Freeman, 2002). Table 1 offers an overview of research, which has concerned itself with the gap between a firm's CSR commitment and its CSR communication.

Many stakeholders are pleased with the increased supply of CSR reports, but some are also skeptical as this development gives opportunities for deception, such as greenwashing. This is owed to the issues with comparability of the reports and the fact that the regulatory progress of this report-

Table 1: Studies addressing the communication-behavior gap

Hammond and Miles (2004)	High quality CSR is not necessarily synonymous with responsible performance, and indeed research indicates this (p. 62).
Dando and Swift (2003)	Such a general lack of third-party assurance has likely contributed to general critique that social reporting is simply about corporate spin and public relations (p. 197).
Laufer (2003)	. . . the growing body of social and environmental accounting research that finds corporate posturing and deception in the absence of external monitoring and verification, e.g., the structuring of corporate disclosures so as to maximize perceptions of legitimacy (p. 253).
Lock and Seele (2017)	Credibility in organizational communication is often challenged because of discrepancies between words and deeds that result in "credibility" or "legitimacy" gaps (p. 585).
Siano, Vollero, Conte, and Amabile (2017)	Deceptive communication, often labelled as greenwashing, has become a recurrent practice in the context of marketing and corporate communica-tion strategies, aimed at hiding the most controversial aspects related to corporate sustainability. There are several possible reasons for this emerging trend, such as the increasing pressure on companies from dif-ferent stakeholder groups, and the potential benefits that can be gained by a company in terms of financial performance and reputational capital (p. 27).
Milne and Gray (2013)	What is also suggested here and has been of concern to academics for some time, is that reporting and performance are not the same (p. 9).

ing has been slower in its development than the increasing demand for this kind of information. (Delmas & Burbano, 2011)

Often, there is a mismatch between shareholders' expectations in firm behavior and their perception of what firms actually do. Discrepancies between words and actions in a firm's behavior can result in credibility gaps in their communication (Sethi, 1975). These gaps between firms and stakeholders can also occur when the firms do not communicate their CSR efforts in a credible way (Illia et al., 2013). This can compromise their legitimacy in society, jeopardizing their "license to operate" in society (Donaldson & Dunfee, 1999). It generally seems like there is a divergence between stakeholder's expectations of a company's CSR and the company's actions (Dando & Swift, 2003).

Firms from industries with negative associations such as oil or chemicals might engage in strategies that are supposed to shift the attention away from the firm's business and create confusion to enhance firm objectives and accomplishments in a deceptive way (Laufer, 2003). Among the top reporters are firms with the worst history of environmental impact, having spent a lot of resources to acquire a green image (Hammond & Miles, 2004). Publicizing high CSR performance might not be about gaining credibility but more about shifting the attention away from actually poor social and environmental performance (Hammond & Miles, 2004). Firms with poor social and environmental performance draw a bigger benefit from manipulating the image stakeholders have of the firm's CSR performance (Clarkson, Li, Richardson, & Vasvari, 2008). In this sense, companies with lower CSR performance should be expected to issue standalone CSR reports to deflect from their mishaps, improve their public reputation to appear as a good corporate citizen, and legitimize their standing with stakeholders (Mahoney, Thorne, Cecil, & LaGore, 2013). CSR disclosure could rather be seen as a means for mediating the effect of poor performance on a company's reputation (Cho, Roberts, & Patten, 2010).

Hall defined reputation as "a fragile resource; it takes time to create, it cannot be bought, and it can be damaged easily" (Hall, 1993). Companies are in constant interaction with their stakeholders. These interactions do not always have a positive outcome and put a company's reputation at risk (Fombrun, Gardberg, & Barnett, 2000). As previous research has suggested that there is a positive relationship between CSR initiatives and corporate reputation, managing these activities becomes extremely important (Bebbington, Larrinaga, & Moneva, 2008).

Greenwashing implies that the disclosed CSR information does not necessarily correspond with a firm's actual social and environmental performance (Cho & Patten, 2007). It refers to the fact that companies creatively manage and repair their public reputation with regard to environmental performance. They do so by issuing disinformation like deflecting attributions of fault, disguising the true nature of problems or accusations, hiding deviance, or reattributing blame. This is done to appear in a good light and some sort of leadership position (Laufer, 2003). Greenwashing describes the situation when companies are willing to take up the costs of voluntary disclosure to publish misleading or false CSR information to trick their stakeholders into believing that they are responsible (Cho et al., 2010; Guidry & Patten, 2010; Lyon & Maxwell, 2011). Greenwashing does not necessarily have to involve the disclosure of false information, but the conscious and advantageous omission of negative and damaging information (Mahoney et al., 2013). Firms that engage in labor rights abuses would not disclose in such legal non-compliance to avoid reputational loss and possible restrictions (Belal & Cooper, 2011).

This communication-behavior gap clearly shows that CSR commitment and CSR communication should not be considered to be the same thing. This is why a clear distinction was made between CSR commitment and CSR communication in this thesis, and the influences of both types of CSR activities on CFP were examined.

2.3. Overview of hypothesis

Table 2 provides an overview of all hypotheses derived in the previous sections. A simplified illustration of the hypotheses can be found in the Appendix A1.

3. Data and Method

The biggest challenge of research in the field of CSR is the identification of tangible parameters that can be used to measure CSR activities. Therefore, much attention has been paid to the creation of the variables assessing CSR activities. The main contribution of this work was, therefore, the construction of some of the following variables. In order to transparently reflect the complex process of creating these variables, the method behind their construction is already explained in the definition of the variables themselves. First, the process of collecting the data, and its preparation for the statistical analysis is described. Afterward, the data sources are named, and the sample selection is explained. This is followed by the presentation of the dependent, independent, and control variables. The chapter concludes with the statistical method, explaining the choice of the regression models.

3.1. Data sources

The data on financial performance, as well as the number of employees, ESG scores, sustainability awards, industry membership, and firm nationality, were all collected from the Thomson Reuters Datastream. This platform contains financial and macroeconomic data for companies in 175 countries and 60 markets (Thomson Reuters, 2013).

In order to collect the data on CSR communication, the sampled firms' websites and the annual reports and CSR reports for the years 2010 to 2017 were downloaded in the English language. To ensure of the continuity and completeness of the data, the firms' archival data was complemented with CSR reports gathered from the GRI database. The GRI database contains CSR reports published from 1999 until the date for more than 6,000 companies worldwide (García-Sánchez et al., 2019). If there was no report on either website, it was assumed that no CSR report was published in the respective year. The information on a company's age was retrieved from their websites as well.

3.2. Sample selection

For increased comparability, only firms from European countries were selected. All of these countries are members of the UN. Therefore, the fact that all the firm's headquarters are located in Europe makes them more comparable with regard to regulations concerning social, environmental, and economic laws and regulations as well as CSR reporting standards and requirements. Strongly differing legal and regulatory frameworks may have affected both the level of CSR disclosure and CFP (Beck, Frost, & Jones, 2018). The observation period from 2011 to 2018 was deliberately chosen. First of all, 2018 was the most recent year for which uniform and complete business figures were available for most companies. In addition, a major environmental scandal, the Volkswagen emissions scandal, was uncovered in 2015. In this scandal, fraud in sustainability reporting was uncovered and punished on an unprecedented scale and may have sensitized companies to false or exaggerated reporting. The selected time frame can be divided into two roughly equally long periods before and after the exposure of the scandal. This scandal is by no means the subject of this paper. It only served as an orientation for the selection of the investigation period.

To create a first pool of potential firms, the European companies, which are in the 80th percentile of their industry in terms of market capitalization, were preselected from the Thomson Reuters database. This selection criterium was chosen to enhance the comparability of the companies among each other. As all of these firms are publicly listed, all of them and their activities are of public interest, giving them a certain degree of publicity. To make sure that sufficient historical data was available for the regression analysis, companies with less than eight years of continuous data on ESG scores, CFP, employee numbers, total liabilities, total assets, and sustainability awards were eliminated. In the next step, the annual and CSR reports for these companies were retrieved. If it was not possible to access all the annual reports of a company for the relevant years, or if it was evident that a CSR report was issued, but not accessible, the company was eliminated from the sample. This reduced the sample to 49 companies. A total of 656 reports (392 annual and 264 CSR reports) were collected.

3.3. Variables

3.3.1. Dependent variables

This study examines the influence of CSR activities on CFP. A variety of proxies for CFP have been used in previous research. While many studies have looked at accounting-based proxies like ROA and ROE, others have examined how stocks perform in relation to their CSR activities (Borgers et al., 2015; Luo et al., 2015). Often, studies only looked at either accounting-based or market-based CFP. This work, stakeholder reactions to CSR activities are being debated, but a special look is taken at shareholders, too. Therefore, both a proxy for market-based CFP and a proxy for accounting-based CFP were used as dependent variables.

Table 2: Hypotheses overview

CSR commitment
H_{1a}: Being awarded a high CSR score has a positive influence on accounting-based CFP.
H_{1b}: Being awarded a sustainability award has a positive influence on accounting-based CFP.
H_{2a}: Being awarded a high CSR score has a positive influence on market-based CFP.
H_{2b}: Being awarded a sustainability award has a positive influence on market-based CFP.
CSR disclosure
H_{3a}: Issuing a standalone CSR report has a positive influence on accounting-based CFP.
H_{3b}: A higher quantity of CSR reporting has a positive influence on accounting-based CFP.
H_{3c}: Addressing a broader range of CSR topics has a positive influence on accounting-based CFP.
H_{4a}: Issuing a standalone CSR report has a positive influence on market-based CFP.
H_{4b}: A higher quantity of CSR reporting has a positive influence on market-based CFP.
H_{4c}: Addressing a broader range of CSR topics has a positive influence on market-based CFP.

ROA: Return on assets (ROA) served as the proxy for accounting-based CFP in this study. Many studies that do not include shareholder perception have used ROA as a measure of CFP (Van der Laan, Van Ees, & Van Witteloostuijn, 2008), as ROA does not reflect external market responses but internal decision-making and managerial performance (Orlitzky et al., 2003). ROA is one of the most widely used and broadest measures of a firm's operating performance used in CSR studies to test the relationship between a firm's financial performance and its CSR activities (Borgers et al., 2015). In the past, this measure has been found to relate better with CSR than alternative measures (McGuire, Sundgren, & Schneeweis, 1988; Waddock & Graves, 1997). Therefore, it was considered an appropriate proxy for accounting-based CFP for this study.

ROA is equal to operating profit before depreciation and provisions divided by total assets (Rodriguez-Fernandez, 2016). It is the ratio of net income to the book value of the total assets of a firm (Brigham & Ehrhardt, 2013) and provides information about the degree to which the revenues of a firm exceed its costs (Firer & Williams, 2003). If, for example, sales increase while the costs structure and assets remain constant, ROA will grow (Zellweger & Nason, 2008).

MBR: In this study, market-based CFP is measured by MBR. The original plan was to use Tobin's Q as a measure of market-based CFP. However, it is difficult to determine the replacement cost of a company's assets, which are needed for the calculation of Tobin's Q. Therefore, the MBR, the most used proxy for Tobin's Q in the literature, was used instead (Erickson & Whited, 2006). This measure has been considered by a large number of researchers in the existing literature to be an appropriate proxy for market-based CFP and has been used frequently (Lo & Sheu, 2007; Marti, Rovira-Val, & Drescher, 2015). Therefore, this measure was chosen for this study.

The MBR is calculated by dividing the market value by the book value of a firm's common stock. In order to determine a firm's market value, the number of shares outstanding must be multiplied by the share price, which equals the market capitalization of a firm (Laskar, Chakraborty, & Maji, 2017). To calculate a firm's book value, the total liabilities of a company must be subtracted from its total assets (Auret & Sinclaire, 2006).

3.3.2. Independent variables

The CSR activities of a firm constitute the basis of the independent variables in this work. Existing studies have used a wide variety of measures of CSR (Choi, Kwak, & Choe, 2010). Before measuring and quantifying CSR activity, these activities were first divided into CSR commitment and CSR communication. CSR commitment represents externally assessed and verified CSR activity, while CSR communication consists of CSR activities that have been reported by a company itself. The variables ESGScore, and SusAwards represent CSR commitment, while the variables CSRreport, CommuQuantity, and CommuBreadth represent CSR communication.

ESGScore: In this thesis, the Thomson Reuters' ESG Combined Score was used as the proxy for CSR commitment. Initially, it was anticipated to use the ESG scores constructed by one of the fourth largest sustainability rating agencies (MSCI ESG, ISS ESG, Video-Eiris, or Sustainalytics). While these scores are available in the Wharton Research Data Services database, accessing this information would have required a more extensive and expensive access than the one the university provides. After thorough literature research and consideration, the ESG Combined Score produced by Thomson Reuters was used as an alternative. The method behind the creation of this score is very similar to that published by ISS ESG, and produces comparable results (Doni & Johannsdottir, 2020). The Thomson Reuters ESG scores database was introduced in 2018. It replaces and extends the well-known ASSET4 database. The database contains time series data dating back to the year 2002, and entails ESG scores of more than 7000 international companies (Thomson Reuters, 2013).

A big weakness of sustainability scores like the ESG scores is that the company in question often provided most, if not all of the data used for the assessment, and that there is no kind of independent third-party verification of the accuracy of the score (Orlitzky et al., 2003; Soana, 2011). ASSET4 and now Thomson Reuters ESG added an ethical screening to their method to overcome this issue. This screening includes any controversial information about a firm that has been published by NGOs, stock exchange filings, and news sources. The detection of this kind of information leads to the lowering of the overall score. Therefore, these scores are objectively measuring companies' ESG performance across the main areas, and differentiate firms that are transparent from those that are publicizing more than they are actually executing (Thomson Reuters, 2013). The three pillars, covering ten main areas, that are evaluated to estimate the ESG scores are the following: environmental aspects (resource use, emissions, innovation), social aspects (workforce, human rights, community, product responsibility) and governance aspects (management, shareholders, CSR strategy).

The sustainability performance of a firm in all ten areas is assessed. In a next step, this preliminary score is then offset against a controversial score, based on the negative information on the firm. This results in the ESG Combined Score. Thomson Reuters rates each company with a number between 0 and 1. The higher the score, the better the company's CSR performance. Based on this score, a grade is awarded to the firms. Investigating all of those aspects as well as taking into account controversies the companies were involved in, the Thomson Reuters ESG Combined Score offers a comprehensive rating that covers the multidimensional concept of CSR (Dinçer & Yüksel, 2018). To achieve the most accurate scoring, a combination of human and algorithmic sourcing is used to retrieve the data (Thomson Reuters, 2013).

Table 3 provides an overview of the Thomson Reuters ESG Combined Score range for every grade. Based on these grades, the firms were assigned a score for the variable. Consequently, the variable took a value between one and twelve.

SusAwards: Winning one or more sustainability awards was determined as another sign of CSR commitment. Previous studies (e.g., Klassen & McLaughlin, 1996) have used this variable in their research. Therefore, it was examined whether this variable also has an impact on the measures of CFP chosen in this study. In this study, not only environmental awards, but any kind of sustainability awards were taken into account. The information on whether a firm had been awarded with a sustainability prize was obtained from Thomson Reuters. The number of awards won was not taken into consideration. This variable was coded as a dummy variable. It therefore took the value of "1" if the company had won an award in the respective year, and "0" if not.

CSRreport: CSR reports are considered to be one of the most effective tools for a firm to inform a its stakeholders about its CSR commitments (Hooghiemstra, 2000). This variable was created to find out if stakeholders and shareholders actually value the publication of standalone CSR reports. Following Kolk and Perego (2010) and Gamerschlag, Möller, and Verbeeten (2011), this variable was operationalized as a dummy variable. It took the value "1" if a company released a standalone CSR report in the respective year, and "0" otherwise.

CommuQuantity: To understand whether the sheer quantity of CSR reporting has an impact on CFP, this variable was produced. In order to create this variable, it was necessary to create an overview of how voluminous the CSR reporting of the individual companies was in the in each year. It was decided to use the word count of the reports as an indicator. While this was more complex than using the number of pages, it proved to be the more accurate and appropriate metric, as the reports differed greatly in terms of font size and the use of images. For some companies, no standalone CSR reports were available, either for several years or generally. Some companies published socalled integrated reports in which the information on CSR was located in the same document as the financial information, but clearly separated from it. For some companies, CSR information was not explicitly presented and almost hidden in the annual reports. Assigning a word count of zero to companies that did not publish a standalone CSR report did not seem appropriate. Therefore, the annual and integrated reports of all firms, amounting in a total of 392 reports (49 firms over eight years), were screened manually for CSR-related information. The decision as to which text passages dealt with CSR-relevant topics was made by the author of this work herself. In order to get a picture of what is relevant to CSR, the SDGs were utilized. As the SDGs have the advantage of covering a wide range of sustainability issues, they were considered an appropriate orientation. The SDGs were studied in detail in advance so that the decision on what was considered as CSR-relevant could be made with confidence. The content related to CSR was then collected in separate word documents, and the number of words was determined. The word counts of the individual standalone CSR reports were also determined. These reports were not screened first because it could be assumed that the entire content is CSR related. To calculate the overall word count of the individual companies for the respective years, the word count of their annual or integrated report was added to the word count of the company's standalone CSR report, if available. On the basis of this word count, three groups were formed: high word count, medium word count, and low word count. The firms were then assigned to three groups: low communication quantity, medium communication quantity, and high communication quantity. The firms with an overall word count below 10500 were considered to be in the low communication quantity group, firms with a word count between 10500 and 25000 were assigned to the medium communication quantity group, and the firms with a word count above 25000 were selected into the high communication quantity group[4].

CommuBreadth: The role of the quantity of CSR reporting has been researched widely in the existing investment literature (Dhaliwal et al., 2012). A topic that has not received an equal amount of attention is the content of the reported information (Harjoto & Jo, 2015). A company that discloses CSR information across many dimensions of sustainability could

[4]The values 10500 and 25000 were about 2/3 and 4/3 of the mean of the word count, respectively, and where therefore chosen as limits

Table 3: ESG Combined Score range

Score Range	Grade	Variable score
0.0 <= score <= 0.083333	D-	1
0.083333 < score <= 0.166666	D	2
0.166666 < score <= 0.250000	D+	3
0.250000 < score <= 0.333333	C-	4
0.333333 < score <= 0.416666	C	5
0.416666 < score <= 0.500000	C+	6
0.500000 < score <= 0.583333	B-	7
0.583333 < score <= 0.666666	B	8
0.666666 < score <= 0.750000	B+	9
0.750000 < score <= 0.833333	A-	10
0.833333 < score <= 0.916666	A	11
0.916666 < score <= 1	A+	12

be considered to be a company engaged in many CSR policies and practices (Beck et al., 2018). For this study, a new coding system was developed that resulted in an index, which constitutes this variable.

The SDGs were used as a framework for the creation of this variable. These goals provide companies with a very broad and well-defined overview of sustainability issues. They transform the intangible topic of sustainability into tangible goals. No other sustainability agenda provides such detailed guidance on how to achieve CSR objectives. Therefore, their content was chosen to be the basis for the keywords used in the qualitative content analysis, which will be described in the following.

The SDGs were only introduced in October 2015, while the observation period of this paper spans from 2011 to 2018. This should not be a problem since, as already mentioned, only the thematic areas of the SDGs were addressed, which must have already been relevant before 2015. It has to be clarified that these goals specifically and the question of their legitimacy, were not the subject of this paper. They serve merely as an orientation. The single SDGs should therefore rather be seen as single CSR topics, and considered a helpful guide for navigating a company's CSR activities. Therefore, the single SDGs will be referred to as "CSR topics" in the following.

To come up with a catalogue of keywords, the progress reports on the SDGs of the last four years were screened manually[5]. These reports give an overview and an explanation of the CSR topics, and report on the measures taken to achieve each single CSR topic. During this screening, the words which were most frequently used by the UN authors in connection with each CSR topic were identified. The frequency of each word was noted. To avoid making the following content analysis too general, the number of keywords was limited to the 20 most frequently mentioned words per CSR topic.

A pretest was conducted to ensure that the keywords were reliably capturing the main message of the respective CSR topic. For this, 20 annual, integrated, and CSR reports were randomly selected from the sample, and uploaded to MAXQDA. In the next step, a code system for the keywords was created, resulting in 16 codes, one for each CSR topic[6],[7]. The keywords were then entered into the lexical search of the program, and the coded sections in the reports were assigned to the corresponding CSR topic codes. After the screening, the highlighted passages were reviewed in order to see if the lexical search actually highlighted content that was related to the respective CSR topic. Based on these findings, modifications were made to the original set of keywords. The lexical search option in MAXQDA allows to set conditions for the keyword search. It is possible to make it a precondition that a keyword is only recognized as such if it is located in the same sentence as another predefined word. The other way around, it is possible to prohibit the program from finding a keyword in the text if it is mentioned in the same sentence as another predefined word. This allows to put keywords into context and prevents the highlighting of sections that have no relation to the information one is looking for. The main issue was that some words had a different meaning, depending on their context. For example, it had to be predefined that the word "rape" should not be highlighted if the words "seed" or "oil" were also in the same sentence. This was done to guarantee that the highlighted sections were addressing the issue of sexual abuse. Also, the word "AIDS", referring to the illness, had to be excluded from the list of keywords as it could not be satisfactorily distinguished from the word "aids", which refers to help or helping. Therefore, too many unrelated sentences would have been highlighted, and it was decided to exclude the word completely. Keywords with no hits in the pretest were also eliminated. This method of modification was repeated until the results reached a satisfactory level of accuracy. The list of keywords consisted of 150 words and

[5]These reports can be found in Appendix A4.

[6]Since Goal 17 of the SDGs is not a CSR topic, but an encouragement for the cooperation to achieve the other 16 goals, it was not included.

[7]A simplified graphic illustration of this process can be found in Appendix A2.

varied from five to 17 words per CSR topic (for an overview of this list, see Appendix A3).

In the next step, all annual and CSR reports[8] from the sample firms were screened with the code system in MAXQDA. The results were exported in an Excel document. The number of hits for the individual CSR topic in every single report was counted. If a company had issued both an annual and a standalone CSR report in one year, the hits in both reports for that year were added up. This resulted in an overview of the number of hits of every CSR topic for every firm in every year.

There were several ways in which this information could be processed and evaluated. As the number of assigned keywords was not the same for every single CSR topic, the idea to incorporate this irregularity was considered. In this scenario, the number of hits per topic would have been divided through the number of keywords assigned to this topic. This would have resulted in a hit count relative to the number of keywords. Another option was to conduct an absolute breadth score index. This index reflects how many CSR topics were addressed in a report in total. The latter option was considered to be more practical and appropriate for subsequent analysis and interpretation, and was, therefore, pursued. To conduct this index, it had to be determined from which number of hits a CSR topic was to be considered as having been addressed. If there were three or more hits assigned to a CSR topic, it was considered to have been captured in that year's reporting of a firm. This hurdle was set in order to guarantee that the keywords of a topic were not only found in a document due to an inaccuracy in the method. The hits were reviewed after each keyword search, but it could not be guaranteed that no mistake was ever overlooked. However, it was much more unlikely that three text passages in a document representing a false positive were overlooked during manual reviewing. The number of covered CSR topics was added up. The absolute breadth score index of a firm, therefore, took a value between 0 (no CSR topics were addressed in the reports of that year) and 16 (all CSR topics were addressed in the reports of that year). This index was used as an ordinally scaled variable in the regression.

3.3.3. Control variables

FirmSize: Size could have an influence on the value of CSR activities for a firm. Size influences the level of risk a firm faces. Firms that have a bigger presence in the market are exposed to more risk than smaller firms. With a greater firm size comes a greater amount of both internal and external transactions. This leads to a greater probability of negative events happening. Consequently, bigger firms should be more eager to engage in CSR activities than smaller firms to protect themselves from a loss of reputation in case of a negative outcome of one of their transactions. (Godfrey et al., 2009; Kimberly, 1976) The number of employees was used as a proxy for firm size. For each year and company, this value was extracted. The firms were assigned to three size groups. Firms with 1000 employees or less were assigned into the small group, firms with 1001 to 10000 employees were assigned to the medium group, and firms with more employees were assigned to the big group. Hence, the variable took a value of 1 to 3.

Industry: To avoid misleading interpretations, potential effects of the industry membership on CFP, triggered by, for example, fluctuations in the demand for goods or the reputation of certain industries over the years, had to be controlled for (Dess, Ireland, & Hitt, 1990). The industry membership might also influence the way CSR activities are perceived by stakeholders. Some industries might be suffering from a bad connotation (e.g. the tobacco industry) or a bad reputation because of past misconduct (Godfrey et al., 2009). CSR activities are used to build up moral capital by portraying the image of pursuing goals that are not only self-serving. Acting in a way that affects stakeholders in a negative way is counterproductive to those activities. Firms for industries that are generally known for having a negative social or environmental impact, CSR activities might be perceived to rather be some sort of 'blood money' than genuine efforts to improve the world. It might also be seen as an effort to substitute for destructive practices to offset the negative image of the firm. If this is the case, the value of the CSR activities either ceases or, in the worst case, those activities might be interpreted as an effort to deceive the public. (E. E. Jones, 1964) The allocation of the companies to the individual industries mostly followed the classification of Thomson Reuters Datastream. However, the tobacco industry was not considered to be part of the food industry, as it was perceived as much more controversial. Table 4 offers an overview of all industries.

FirmVisibility: There are a few ways in which firm visibility could influence CFP. The visibility of a firm has shown to influence its market value (Cheng et al., 2014). Also, as higher stakeholder pressures are usually placed on firms which are in the public eye, firm visibility needed to be controlled for (Shahzad & Sharfman, 2017). Increased public exposure and, therefore, higher visibility can put a firm under higher scrutiny by stakeholders, making it easier to expose any misconducts more easily than those of firms with less public exposure (K.-H. Kim, Kim, & Qian, 2018). Originally, marketing expenses were supposed to be a control variable for firm visibility. Unfortunately, the databases in the Wharton Research Data Services did only supply this information for a small number of the selected firms. Having to find a new set of firms that met all of the criteria, and searching for and scanning their annual and CSR reports would have taken up too much time. Consequently, after scanning the literature for appropriate and accessible alternatives, a proxy for firm visibility was generated. Taking a note from Gamerschlag et al. (2011), the visibility of a firm was determined by counting the number of hits when searching for the company's name on the Handelsblatt newspaper's archives website, while filtering for the respective year. This was considered an appropriate measure as the Handelsblatt is Germany's most important business-related newspaper. The fact that it is a German

[8] All 656 reports can be provided on request.

Table 4: Overview of industries

Number	Industry
1	Airlines
2	Financial Services
3	Real Estate
4	Energy
5	Food Processing & Retailing
6	Integrated Telecommunications Services
7	Insurance
8	Oil & Gas
9	Personal Products
10	Pharma
11	Tobacco

newspaper was not considered to distort the results as all the firms were listed companies and of international interest. To be sure, the hit counts of firms from Germany and other countries which were relatively similar in size and popularity were compared, and no bias towards German companies was detected. The firms were subsequently sorted into three groups. Firms with 25 or viewer hits were assigned to the low visibility group, firms with a hit count between 26 and 150 were assigned to the medium visibility group, and firms with a higher hit count were assigned to the high visibility group. Accordingly, the variable took a value between 1 and 3.

FirmAge: The age of a firm can also play a role in the financial performance of a company. Many studies assume that, as the years go by, only the better companies will survive, and therefore it can be assumed that older companies will continue to have a higher life expectancy (Dunne, Roberts, & Samuelson, 1989). It has also been shown that older companies enjoy higher profits and value (Hopenhayn, 1992). Therefore, the study controlled for firm age.

MAacquirer & MAtarget: It was also controlled for whether the firms had been the target or an acquirer in a merger or an acquisition with a volume of over 1 million dollars. This amount was chosen, as the firms in the sample were in the 80th percentile with regard to market capitalization. So smaller volume M&A cases seemed neglectable. Because a differentiation between being a target or being an acquirer was made, two dummy variables were created.

The table 5 offers an overview of all variables.

3.4. Statistical method

In the following section, the choice of the regression models is briefly explained. An overview of all hypotheses, and the models in which they are being tested, is presented. All of the analyses were conducted in the statistical software Stata/IC Version 16.1.

3.4.1. Panel data

A great advantage of panel data is that individual heterogeneity can be controlled for. Not controlling for this heterogeneity can result in biased results (Moulton, 1987). Panel data, compared to, for example, time-series studies, give more informative data and less collinearity among the variables, since the cross-section dimension adds variability. This more informative data also produces more reliable results. (Baltagi, 2005)

3.4.2. Fixed-effects and random-effects models

The two most commonly used techniques to analyze panel data are fixed-effects and random-effects models. Both models have their advantages and disadvantages. Due to the within-transformation, the fixed-effects model has the advantage of being able to control individual, unnoticed effects and is, therefore, more robust against the assumption of strict exogeneity. However, this within-transformation also contains a disadvantage. In the course of the transformation, all, also observable, time-invariant effects are removed, so that constant, independent variables cannot be considered (Wooldridge, 2005). Unlike the fixed-effects model, the random-effects model assumes that the individual, unobserved effects are not correlated with the exogenous variables. The unobserved effect has an expected value from zero and is, together with the idiosyncratic error, part of the disturbance term (Baltagi, 2005). While the random-effects model takes time invariant effects into account, and often produces a more generalizable result, it often introduces biases in the estimates of ß (Baltagi, Bresson, & Pirotte, 2003).

3.4.3. Hausman test

The question of whether to use the fixed-effects or random-effects model when analyzing panel data has been debated thoroughly, with advocates for both models (Wooldridge, 2005). In order to determine whether the random-effect model or the fixed-effects model is more appropriate, a Hausman test was conducted (Greene, 2002). The Hausman test is a specification test that is based on the difference between the random- and the fixed-effects estimator (Wooldridge, 2005). This test reveals which of the two tests is most efficient given the sample. It uses a χ^2 distribution with one degree of freedom (Greene, 2002)

Table 5: Overview of variables

Dependent variables	
ROA	Return-on-assets
MBR	Market-to-book ratio
Independent variables	
ESGScore	Thomson Reuters ESG Combined Score
SusAwards	Was a sustainability award won?
CSRreport	Was a standalone CSR report published?
CommuQuantity	Word count of CSR reporting, 3 groups
CommuBreadth	Number of CSR topics communicated
Control variables	
FirmSize	Number of employees, 3 groups
Industry	Industry membership
FirmVisibility	Articles in Handelsblatt archive, 3 groups
FirmAge	Age of the firm in years
MAacquirer	Was the firm the acquirer in an M&A deal?
MAtarget	Was the firm the target in an M&A deal?

and tests the null hypothesis that the conditional mean of the disturbances given the regressor is zero (Baltagi et al., 2003). If the chi2 takes a value smaller than 0.05, the null hypothesis is rejected (Greene, 2002), and the fixed-effects estimator should be reported. If the null hypothesis cannot be rejected, the random-effects estimator is presented (Baltagi et al., 2003).

3.4.4. Mixed-effects models

According to the literature, multilevel mixed-effects models have been used to test panel data as well (e.g., Pablo-Romero & Sánchez-Braza, 2017). Mixed-effects models are regression models that fixed as well as contain group-specific random effects (Speelman, Heylen, & Geeraerts, 2018). In longitudinal data and panel data, these random effects prove to be useful for modeling intracluster correlation (StataCorp, 2013). Mixed-effects models can yield more generalizable results and allow for time-invariant effects, like industry, to be considered in the regression. These effects are omitted in a fixed-effects model. (Speelman et al., 2018) Therefore, to ensure the robustness of the results of this study and measure the influence of time-invariant variables, a multilevel mixed-effects regression was performed for every model and the results were compared to those of the random- and fixed-effects regressions. The table 6 offers an overview of which hypotheses are tested in which models.

4. Results

In the following chapter, the results of the statistical analysis will be presented. The section is divided into two parts, starting with descriptive statistics which already contains a high information content. This is followed by the results of the regression analyses. These results determine whether the hypotheses can be supported or must be rejected.

4.1. Descriptive statistics

Sample description: The data set used in this analysis was a fixed, strongly balanced panel, since the same set of firms was examined for each period, and no values for any variables are missing in any period (Greene, 2002). This was an excellent precondition for the regression analysis (Baltagi, 2005). The sample consisted of 49 firms from 14 European countries. The observation period was eight years. The number of observations was, therefore, 392. The firms in the sample, on average, were 74 years old, employed 68867 people, and had a market capitalization of 75.400.000 US Dollars. Table 7 offers an overview of the distribution of companies by industry.

ESG Scores: On average, the firms in the sample had the highest ESG Scores in 2015 (7.5) and the lowest in 2013 and 2014 (6.4). The industries whose firms had the highest ESG Scores on average were the real estate (7.93), energy (7.69), and insurance (7.42) industry. The industries with the lowest average ESG scores were the airlines (5.69), tobacco (6.13), and financial services (6.24) industry. The average ESG Score over all industries and years was 6.73. The firms in the medium size group had the highest ESG score on average (7.14).

Sustainability awards: In the year 2011, the highest number of firms (about 74%) won one or more sustainability awards. In the following years, the percentage was between 63 and 65.

The industries that have won one or more sustainability awards in the most years are the integrated telecommunications services, personal products, and tobacco (all 100%) industry. The industries that won such awards in the lowest number of years were the airlines (43.75%), financial services (48.61%), and oil and gas (50%) industry.

Small firms with regard to employees won sustainability awards most frequently, while firms in the midsize category won them in the lowest number of years.

Table 6: Hypotheses and regression models

Hypotheses	Model
	Random-effects and mixed-effects
H_{1a}: Being awarded a high CSR score has a positive influence on accounting-based CFP. H_{1b}: Being awarded a sustainability award has a positive influence on accounting-based CFP.	ROAi, t = ß0 + ß1 * Awardi,t + ß2 * ESGScorei,t + ß3 * FirmSizei,t + ß4 * FirmVisibilityi,t + ß5 * FirmAgei,t + ß6 * MAtargeti,t + ß7 * MAacquireri,t + ß8 * Industryi + $\varepsilon_{i,t}$
	Random-effects and mixed-effects
H_{2a}: Being awarded a high CSR score has a positive influence on market-based CFP. H_{2b}: Being awarded a sustainability award has a positive influence on market-based CFP.	MBRi, t = ß0 + ß1 * ESGScorei,t + ß2 * Awardi,t + ß3 * FirmSizei,t + ß4 * FirmVisibilityi,t + ß5 * FirmAgei,t + ß6 * MAtargeti,t + ß7 * MAacquireri,t + ß8 * Industryi + $\varepsilon_{i,t}$
	Fixed-effects and mixed-effects
H_{3a}: Issuing a standalone CSR report has a positive influence on accounting-based CFP. H_{3b}: A higher quantity of CSR reporting has a positive influence on accounting-based CFP. H_{3c}: Addressing a broader range of CSR topics has a positive influence on accounting-based CFP.	ROAi, t = ß0 + ß1 * SusReporti,t + ß2 * CommuQuantityi,t + ß3 * CommuBreadthi,t + ß4 * FirmSizei,t + ß5 * FirmVisibilityi,t + ß6 * FirmAgei,t + ß7 * MAtargeti,t + ß8 * MAacquireri,t + ß9 * Industryi + $\varepsilon_{i,t}$
	Fixed-effects and mixed-effects
H_{4a}: Issuing a standalone CSR report has a positive influence on market-based CFP. H_{4b}: A higher quantity of CSR reporting has a positive influence on market-based CFP. H_{4c}: Addressing a broader range of CSR topics has a positive influence on market-based CFP.	MBRi, t = ß0 + ß1 * SusReporti,t + ß2 * CommuQuantityi,t + ß3 * CommuBreadthi,t + ß4 * FirmSizei,t + ß5 * FirmVisibilityi,t + ß6 * FirmAgei,t + ß7 * MAtargeti,t + ß8 * MAacquireri,t + ß9 * Industryi + $\varepsilon_{i,t}$

Table 7: Number of firms per industry

Number	Industry	Firms
1	Airlines	4
2	Financial Services	9
3	Real Estate	5
4	Energy	4
5	Food Processing & Retailing	9
6	Integrated Telecommunications Services	1
7	Insurance	3
8	Oil & Gas	5
9	Personal Products	2
10	Pharma	6
11	Tobacco	1

Standalone CSR reports: The most standalone CSR reports were published in 2012, 2013 and 2015 (in all years 71.4%). The year in which the least standalone reports were published was 2011 (53%). Over all industries and years, 67% of firms published standalone CSR reports. The industries which tended to publish more standalone CSR reports were the tobacco (100%), oil and gas (97.5%), and insurance (95.8%) industry. Least likely to publish standalone CSR reports were the firms in the pharma (27%), food processing and retailing (47%), and real estate (50%) industry. The firms with the highest number of employees published standalone CSR reports most frequently.

Communication quantity: There was no consistent increase in the quantity of reporting over the observation period. Looking at the absolute word count of CSR reporting, there was even a decrease in 2018. The industries whose companies most often belonged to the highest communication quantity group were the oil and gas, integrated communications services and energy industry. The industries with the lowest levels of communication quantity were the food processing and retailing, pharma and real estate industry. Firms with a higher number of employees also communicated more in terms of quantity.

Communication breadth: There was an increase in the overall CSR breadth from 2011 (ø5.12 CSR topics) to 2018 (ø7.10 CSR topics), with a drop in 2016.

Many CSR topics were communicated by the highest percentage of firms in 2018 and the lowest percentage of firms in 2011. Some topics experienced peaks and lows in other years. The topic of "no poverty" was communicated the most in 2015 and 2016, and the least in 2011, 2012 and 2013. The topic of "good health and well-being" peaked in 2013 and was at a lowest in 2017. The communication of almost all the CSR topics increased sharply from 2011 to 2012, except the topics of "zero hunger" and "reduced inequalities", which actually slightly decreased in 2012. Also, the communication of many goals experienced a sharp decrease in the year 2016. Exceptions for this were the topics of "no poverty", "zero hunger", and "clean water and sanitation", which stayed the same compared to 2015, and the topic of "sustainable cities and communities", which slightly increased. 2016 was actually the year in which the topic of "no poverty" was communicated the most. The CSR topics with the sharpest decreases in 2016 were "good health and well-being (19% decrease), "quality education" (10% decrease), "industry, innovation, and infrastructure" (10% decrease) and "life on land" (16% decrease).

The CSR topics that were communicated the most were "peace, justice, and strong institutions" (85.71%), "affordable and green energy" (77.55%), "climate action" (74.75%), and "responsible consumption and production" (62.25%). The CSR topics that were communicated the least were "life below water" (2.3%), "reduced inequalities" (2.3%), "no poverty (9,44%), and "life on land" (15.56%).

The industries that covered the most CSR topics in their reporting were the energy (ø8.09 CSR topics), pharma (ø7.75 CSR topics) and insurance industry (ø7.25 CSR topics). The industries that covered the least CSR topics were the tobacco (ø4.13 CSR topics), real estate (ø4.7 CSR topics), and the airline industry (ø5.31 CSR topics).

Small firms reported on 4.7, midsize firms on 5.2, and big firms on 6.6 CSR topics on average.

4.2. Regression results

In the following, the regression results will be presented. In this course, the hypotheses put forward in chapter 2 are tested and subsequently either supported or rejected. A 95% confidence interval was chosen throughout this study. Therefore, the significance level is equal to 5%. Consequently, pvalues which are equal to or smaller than 0.05 will be interpreted as statistically significant with a 95% accuracy.

CSR commitment on ROA: The pvalue produced by the Hausman test (Prob > chi2 = 0.1440), was above the critical value of 0.05. This indicates that the random-effects model gives consistent estimates for the model measuring the influence of CSR engagement on ROA. Therefore, the random-effects model was a more appropriate model in this case, and used in the regression analysis.

Table 8 shows the output of the random-effects GLS regression examining the influence of CSR commitment on ROA. The overall R^2 of the model was 0.4192. Therefore, the model could explain 41.92% of the variance of ROA. The effect of the ESGScore variable on ROA was statistically not significant. With a pvalue of 0.279, there is no evidence that the Thomson Reuters ESG Combined Scores have any effect on a firm's ROA. The results reveal that the effect of the SusAwards variable had no significant on ROA either (p=0.609). The effects of the control variables FirmVisibility (Group 2, p=0.424; Group 3, p=0.577), FirmAge (p=0.966), FirmSize (Group 2, p=0.869; Group 3, p=0.678), MAacquirer (p=0.519) and MAtarget (p=0.826) were also not significant. Only the membership in industry 10 (ß=11.47778, p=0.000) and industry 11 (ß=14.24037, p=0.013) had a positive and significant effect on ROA.

Table 9 shows the results of the mixed-effects ML regression examining the influence of CSR commitment on ROA. The direction of the effects did not change, and the size of the effects were similar to those of the random-effects model. Both the effect ESGScore and the SusAwards variable were also negative and insignificant in this model. Industry 10 still had a positive and significant effect (ß=5.911365, p=0.008) on ROA. In the mixed-effects model, industry 11 still had a positive but no longer significant effect on ROA. Industry 2 on the other hand was negative and significant (ß=-4.637318, p=0.030) in this model.

Based on these results, the hypothesis, H_{1a}, that having a higher ESG Combined Score has a positive influence on accounting-based CFP must be rejected. Also, the hypothesis, H_{1b}, that being awarded one or multiple sustainability awards has a positive influence on accounting-based CFP must be rejected.

CSR commitment on MBR: The p-value produced by the Hausman test (Prob > chi2 = 0.0802), was above the critical value of 0.05. Therefore, the random-effects model was chosen as the more appropriate model in this case.

Table 10 shows the output of the random-effects GLS regression examining the influence of CSR commitment on MBR. The overall R^2 of the model was 0.5111. Therefore, the model could explain 51.11% of the variance of the dependent variable. The regression shows that the effect of the ESGScore variable on MBR was statistically not significant (p=0.290), and neither was the effect of the SusAwards variable (p=0.104). The effects of the control variables FirmVisibility (Group 2, p=0.776; Group 3, p=0.795), FirmAge (p=0.385), FirmSize (Group 2, p=0.911; Group 3, p=0.933), MAacquirer (p=0.255), and MAtarget (p=0.750) on MBR were also not significant. Again, from all industries, only the membership in industry 10 (ß=6.253643, p=0.000), and industry 11 (ß=6.18611, p=0.017) had a strong and positive and significant effect on MBR.

Table 11 shows the results of the mixed-effects ML regression examining the influence of CSR commitment on MBR. The results of this model support the results on the size and direction of the effects produced by the random-effects model. Both the ESGScore and the SusAwards variable were still negative and not significant. Industry 10 still had a positive and significant effect (ß=6.261066, p=0.000) on ROA.

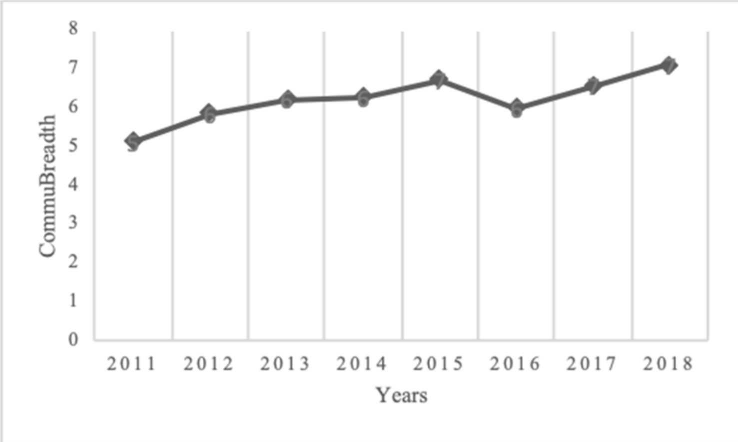

Figure 2: Communication breadth over the years

Table 8: CSR commitment on ROA: Random-effects regression results

	Coefficient	z	P>|z|
ESGScore	-.1521758	-1.08	0.279
SusAwards	-.2941941	-0.51	0.609
FirmVisibility			
2	.6561508	0.80	0.424
3	.6190387	0.56	0.577
FirmAge	-.0005289	-0.04	0.966
MAacquirer	.3918068	0.65	0.519
MAtarget	-.1359419	-0.22	0.826
FirmSize			
2	.3822286	0.16	0.869
3	-1.053903	-0.42	0.678
Industry			
2	-3.141814	-1.02	0.308
3	3.495334	0.86	0.388
4	2.976599	0.80	0.422
5	3.242277	1.05	0.296
6	-1.976519	-0.35	0.729
7	-2.367294	-0.60	0.546
8	1.797051	0.53	0.598
9	8.207561	1.86	0.063
10	11.47778	3.48	0.000
11	14.24037	2.48	0.013

Dependent variable: ROA
R^2=.4192
Number of obs.=392

In the mixed-effects model, Industry 11 still had a positive and significant effect on ROA. In contrast with the results of the random-effects model[9], the membership in industry 9 also had positive and significant effect on MBR (ß=3.8328, p=0.019).

The results reveal that having a higher ESG Combined Score does not have a significant positive influence on CFP. Therefore, H_{2a} has to be rejected. Also, as being awarded one or multiple sustainability awards did not show to have a significant positive influence on CFP, H_{2b} has to be rejected as well.

CSR communication on ROA: The p-value indicated by the Hausman test (Prob > chi2 = 0.0371), was below the critical value of 0.05. This indicates that the null hypothesis for the Hausman test can be rejected and that the fixed-effects model

[9] The p-value of industry 9 was 0.065 in the random-effects model, and, therefore, not far from being significant.

Table 9: CSR commitment on ROA: Mixed-effects regression results

	Coefficient	z	P>|z|
ESGScore	-.1608864	-1.20	0.231
SusAwards	-.324592	-0.59	0.556
Industry			
2	-4.637318	-2.17	0.030
10	5.911365	2.67	0.008
11	11.47489	1.56	0.118

Dependent variable: ROA
Number of obs.=392

Table 10: CSR commitment on MBR: Random-effects regression results

	Coefficient	z	P>|z|
ESGScore	.051698	1.06	0.290
SusAwards	-.3265301	-1.63	0.104
FirmVisibility			
2	.0821697	0.28	0.776
3	.1023839	0.26	0.795
FirmAge	.004871	0.87	0.385
MAacquirer	-.238557	-1.14	0.255
MAtarget	.0681623	0.32	0.750
FirmSize			
2	.0938445	0.11	0.911
3	-.0777448	-0.08	0.933
Industry			
2	-.5558501	-0.40	0.691
3	-.6338108	-0.37	0.715
4	.7152326	0.43	0.667
5	1.29386	0.93	0.354
6	-.4029822	-0.16	0.876
7	-.6371989	-0.36	0.720
8	.0842268	0.05	0.956
9	3.687619	1.84	0.065
10	6.253643	4.20	0.000
11	6.18611	2.39	0.017

Dependent variable: MBR
R^2=.5111
Number of obs.=392

Table 11: CSR commitment on MBR: Mixed-effects regression results

	Coefficient	z	P>|z|
ESGScore	0.0525767	-1.09	0.277
SusAwards	-.3306733	-1.67	0.095
Industry			
9	3.8328	2.34	0.019
10	6.261066	5.11	0.000
11	6.397031	3.02	0.003

Dependent variable: MBR
Number of obs.=392

gives consistent estimates for the model measuring the influence of CSR communication on ROA. Therefore, the fixed-effects model, being the more appropriate model in this case, was chosen for the regression analysis.

Table 12 shows the output of the fixed-effects (within) regression examining the influence of CSR communication on ROA. The overall R^2 of the model was 0.0007. Therefore, the model could explain only 0.07% of the variance of ROA. The influence of the CSRreport variable on ROA was positive, but not statistically significant (p=0.247). A high score in CommuQuantity showed a negative and statistically significant influence on ROA (ß=-2.315213, p=0.032). The effect of the variable representing communication breadth was slightly positive but statistically not significant (p=0.559). The effect of the FirmVisibility variable on ROA was positive but also not significant (Group 2, p=0.140; Group 3, p=0.095). The results of this model suggest, that firm age had a negative and statistically significant influence on ROA (ß=-.2558694, p=0.003). MAacquirer had a positive, and MAtarget a negative influence on ROA, but both effects were statistically not significant. The FirmSize variable did not have a significant influence on ROA either.

Table 13 shows the results of the mixed-effects ML regression examining the influence of CSR communication on ROA. The results were slightly different to those of the fixed-effects model. The effect of the CSRreport variable was still positive (ß=2.000287) but now statistically significant (p=0.024). The effect of belonging to the highest scoring group of the CommuQuantity variable was still negative and statistically significant (ß=-2.531776, p=0.012). In contrast to the fixed-effects model, the mixed-effects model also considered time invariant variables like Industry. Industry 10 showed a positive and statistically significant (ß=5.117817, p=0.010) influence on ROA. The membership in both industry 2 (ß=-5.098802, p=0.008) and industry 7 (ß=-5.120999, p=0.036) had positive and statistically significant in-fluence on ROA. The effect of communication breadth on ROA was now slightly negative, but still not statistically significant.

Based on the results, the hypotheses were evaluated. While the influence of issuing a standalone CSR report on accounting-based CFP was positive but not statistically significant in the fixed-effects model, the mixed-effects model showed a positive and statistically significant effect. H_{3a} can, therefore, only be supported with some reservation. A higher quantity of reporting did not, as assumed, have a positive, but a significant and negative effect on ROA. Therefore, H_{3b} has to be rejected. The results also show that addressing a broader range of sustainability issues did not have a significant and positive influence on accounting-based CFP. Consequently, H_{3c} has to be rejected, too.

CSR communication on MBR: The p-value indicated by the Hausman test (Prob > chi2 = 0.0274), was below the critical value of 0.05. Therefore, the fixed-effects model was chosen in this analysis.

Table 14 shows the output of the fixed-effects (within) regression examining the influence of CSR communication on MBR. The overall R^2 of the model is 0.0012. Therefore, the model could explain only 0.12% of the variance of MBR. The influence of the variable CSRreport was positive, but not statistically significant (p=0.423). Being part of the highest scoring group with regard to communication quantity had a negative and significant but not statistically significant influence on MBR (ß=-.6105019, p=0.10). The effect of the CommuBreadth variable was positive and statistically significant (ß=0.1185186, p=0.011). The effect of the control variables FirmVisibility (Group 2, p=0.654; Group 3, p=0.848), FirmSize (Group 2, p=0.738; Group 3, p=0.526), MAacquirer (p=0.334), and MAtarget (p=0.755) were all statistically not significant. The results indicate that FirmAge had a positive and significant influence on MBR (ß=.0682975, p=0.021).[10]

Table 15 shows the results of the mixed-effects ML regression examining the influence of CSR communication on MBR. The direction of the effects did not change, and the size of the effects are similar to the results of the fixed-effects model. The effect of the CSRreport variable is still positive and not statistically significant (p=0.468). The direction of the influence of high CommuQuantity was still negative (ß=-0.843428) and now statistically significant (p=0.018). The influence of CommuBreadth was still positive and statistically not significant (ß=-.1419855, p=0.001). Unlike the fixed-effects model, the mixed-effects model also considers time invariant variables like industry membership. Memberships in industry 9 (ß=3.322546, p=0.043), industry 10 (ß=5.701553, p=0.000) and industry 11 (ß=6.149283, p=0.004) all showed a positive and statistically significant influence MBR.

These results show that issuing a standalone CSR report does not have a statistically significant positive influence on market-based CFP. Therefore, H_{4a} has to be rejected. Also, a higher quantity of CSR reporting is shown to have a negative influence on market-based CFP. Consequently, H_{4b}, has to be rejected as well. As expected, addressing a broader range of sustainability issues has a positive and significant influence on market-based CFP. H_{4c} can therefore be supported. Table 16 provides a final overview of all hypotheses and whether they were supported or rejected.

5. Follow-up studies

During the implementation of the main study, it became apparent that the data that was collected and processed was far too rich to end the data analysis by simply answering the hypotheses. Therefore, followup studies were conducted.

5.1. Followup study 1

5.1.1. Purpose and method

Not only the question of whether CSR efforts enhance or harm the financial performance of firms is much debated, but

[10] As firm age only showed a significant influence on CFP when the industry variable was omitted from the model, it can be assumed that the age of a firm has no influence on both accounting-based and market-based CFP.

Table 12: CSR communication on ROA: Fixed-effects regression results

	Coefficient	t	P>|t|
CSRreport	1.172592	1.16	0.247
CommuQuantity			
2	-.8275635	-0.94	0.349
3	-2.315213	-2.16	0.032
CommuBreadth	.0792509	0.59	0.559
FirmVisibility			
2	1.258785	1.48	0.140
3	2.025527	1.67	0.095
FirmAge	-.2558694	-3.00	0.003
MAacquirer	.2290191	0.38	0.704
MAtarget	-.168377	-0.27	0.784
FirmSize			
2	1.245724	0.47	0.637
3	-.1002454	-0.03	0.973

Dependent variable: ROA
R^2=.0007
Number of obs.=392

Table 13: CSR communication on ROA: Mixed-effects regression results

	Coefficient	z	P>|z|
CSRreport	2.000287	2.25	0.024
CommuQuantity			
2	-1.132748	-1.34	0.179
3	-2.531776	-2.50	0.012
CommuBreadth	-.1110395	-0.93	0.354
Industry			
2	-5.098802	-2.67	0.008
7	-5.120999	-2.09	0.036
10	5.117817	2.57	0.010

Dependent variable: ROA
Number of obs.=392

there is also discussion around the question if the communication of all types of CSR topics has the same effect or if the individuals topics have a different effect on reputation (Choi et al., 2010; Rodriguez-Fernandez, 2016). The focus of the first followup study was the question of whether the communication of specific goals has different influences on CFP. In order find out, the variable for CSR communication breadth was replaced with dummy variables for the single CSR topic, taking the value of "1" if the CSR topic was reported, and "0" if not.

5.1.2. Results

CSR topics on ROA: The results of both the fixed-effects[11] and mixed-effects regression showed that none of the individual CSR topics proved to have a statistically significant influence on ROA. The results can be found in the Appendix A4.

CSR topics on MBR: The p-value indicated by the Hausman test (Prob > chi2 = 0.5743), was above the critical value of 0.05. Therefore, the random-effects model was chosen as it was the appropriate model in this case.

The results of the random-effects regression (see table 17) show that the communication of three CSR topics (topic 5, topic 7 and topic 10) had a positive and statistically significant influence on MBR, with topic 10 having the greatest influence (ß=2.453523, p=0.000). The communication of topic 9 had a negative and statistically significant influence on MBR. The influence of high communication quantity is still negative and statistically significant (ß=-.7519658, p=0.032).

The results of the mixed-effects regression (see table 18) also show that topic 5, topic 7 and topic 10 had a positive and statistically significant influence on MBR, while the influence

[11] The p-value indicated by the Hausman test (Prob > chi2 = 0.0005), was below the critical value of 0.05.

Table 14: CSR communication on MBR: Fixed-effects regression results

	Coefficient	t	P>|t|
CSRreport	.2790973	0.80	0.423
CommuQuantity			
2	-.1204292	-0.40	0.692
3	-.6105019	-1.65	0.100
CommuBreadth	.1185186	2.54	0.011
FirmVisibility			
2	.1314942	0.45	0.654
3	.0796989	0.19	0.848
FirmAge	.0682975	2.32	0.021
MAacquirer	-.200742	-0.97	0.334
MAtarget	.066247	0.31	0.755
FirmSize			
2	.3039509	-0.33	0.738
3	.6374929	-0.63	0.526

Dependent variable: MBR
R^2=.0012
Number of obs.=392

Table 15: CSR communication on MBR: Mixed-effects regression results

	Coefficient	z	P>|z|
CSRreport	.2424482	0.73	0.468
CommuQuantity			
2	-.2509538	-0.85	0.398
3	-.843428	-2.36	0.018
CommuBreadth	-.1419855	3.29	0.001
Industry			
9	3.322546	2.02	0.043
10	5.701553	4.59	0.000
11	6.149283	2.89	0.004

Dependent variable: MBR
Number of obs.=392

Table 16: Overview of hypotheses and conclusions

CSR commitment	
H_{1a}: Being awarded a high CSR score has a positive influence on accounting-based CFP.	×
H_{1b}: Being awarded a sustainability award has a positive influence on accounting-based CFP.	×
H_{2a}: Being awarded a high CSR score has a positive influence on market-based CFP.	×
H_{2b}: Being awarded a sustainability award has a positive influence on market-based CFP.	×
CSR disclosure	
H_{3a}: Issuing a standalone CSR report has a positive influence on accounting-based CFP.	∼
H_{3b}: A higher quantity of CSR reporting has a positive influence on accounting-based CFP.	×
H_{3c}: Addressing a broader range of CSR topics has a positive influence on accounting-based CFP.	×
H_{4a}: Issuing a standalone CSR report has a positive influence on market-based CFP.	×
H_{4b}: A higher quantity of CSR reporting has a positive influence on market-based CFP.	×
H_{4c}: Addressing a broader range of CSR topics has a positive influence on market-based CFP.	✓

Table 17: Single CSR topics on MBR: Random-effects regression results

	Coefficient	z	P>|z|
CSRreport	.497708	1.46	0.145
CommuQuantity			
2	.0837933	0.27	0.787
3	-.7519658	-2.15	0.032
Topic5	.5544662	2.99	0.003
Topic7	.6288552	2.50	0.013
Topic9	-.6080846	-2.92	0.004
Topic10	2.453523	5.43	0.000

Dependent variable: MBR
R^2=.5770
Number of obs.=392

Table 18: Single CSR topics on MBR: Mixed-effect regression results

	Coefficient	z	P>|z|
CSRreport	.4575111	1.42	0.155
CommuQuantity			
2	-.0592197	-0.20	0.842
3	-.8920096	-2.66	0.008
Topic5	.5779647	3.26	0.001
Topic7	.5952299	2.49	0.013
Topic9	-.5990344	-3.04	0.002
Topic10	2.602657	5.96	0.000

Dependent variable: MBR
Number of obs.=392

of topic 9 remained negative and statistically significant.

5.2. Followup study 2

5.2.1. Purpose and method

As explained in chapter 1, firms may display a communication-behavior gap when it comes to their CSR reporting. The question of whether this strategy is profitable for a firm or punished by its stakeholders is still under debate. The purpose of the following procedure was to disclose whether there was indeed a difference in the level of communication and commitment for certain companies in the sample. While the variables representing CSR commitment had mostly negative (albeit insignificant) influence on both accounting-based and market-based CFP, the variables representing CSR communication had positive and negative influences on the CFP measures. These results did not directly indicate whether a company could benefit from communicating a lot while showing little real commitment. Based on the findings from the literature presented in chapter 1, it is assumed in this study that many companies in the sample exhibit such a difference. The question of whether stakeholders and shareholders can recognize such a discrepancy and punish it accordingly is somewhat more complex. It can be expected that shareholders will become more familiar with the companies in which they eventually invest money. It is therefore assumed that a high level of CSR communication with a low level of CSR commitment has a negative impact on market-based CFP. According to this line of reasoning, this behavior should have a positive impact on accounting-based CFP.

To quantify the firms' behavior, four groups, to which all companies in the sample were assigned annually, were created (see table 19).

Before labeling a firm as "high/low level CSR commitment" or "high/low level CSR communication", it had to be specified what should be considered as a high score in the independent variables. If a firm had an ESG Combined score of seven or higher, it was considered to be in the better half of the sample[12]. If a firm had won at least one sustainability award in the respective year (so scored "1" for the awards dummy) and was in the better half regarding ESG scores, it was considered to display a high level of CSR commitment. Belonging to the highest reporting quantity group (group 3), having reported on 7 or more CSR topics (the median of the CommuBreadth variable was 6), and the publishing of a standalone CSR report (scoring "1" for the CSRreport dummy) were all considered to be signs of a high level of CSR communication. If a firm showed two out of these three signs,

[12] The number seven was chosen because the median of the ESG score variable was 6, so the next higher number was considered to be above average.

Table 19: Groups based on commitment and communication levels

Group 1	Low commitment, low communication
Group 2	Low commitment, high communication
Group 3	High commitment, low communication
Group 4	High commitment, high communication

it was considered to display a high level of CSR communication. According to these assessments, the firms were assigned to the four groups. This was done for every firm and every year. These assignments constituted a new variable, "CombGroup", which took a value between one and four. The regression models were chosen in the same way as described in the above.

In a next step it was examined whether the general affiliation with "high level commitment" or "high level communication" has a significant influence on CFP. To test this, dummy variables were created for these two groups. These variables were labelled "HighCommit" and "HighCommu". This was done to see whether the effect of the four groups were actually due to the constellation of their levels of commitment and communication.

5.2.2. Results

Descriptive statistics show that the largest percentage of enterprises over the entire observation period (41.1%) were in the second group. Although the percentages vary over the years, no linear increase is apparent. The second largest group in percentage terms was that of companies that display low levels of both CSR commitment and CSR communication. The group of companies that show a high level of commitment, but a low level of communication was the group with the lowest percentage.

Group membership on ROA: Neither the results of the random-effects regression[13], nor those of the mixed-effects regression showed a significant effect of any group on ROA. Also, for high level commitment, the results of both the random-effects[14] and the mixed-effects regression showed a negative, but statistically not significant effect on ROA. The same was the case for high level communication.

Group membership on MBR: After performing and interpreting the Hausman test, a random-effects and a mixed-effects regression were performed to determine the influence of group membership on MBR.

The random-effects model showed no statistically significant effect of any of the individual groups on MBR. However, the effect of group 2 (ß=-.3917638, p=0.068) was close to being statistically significant (see table 20) .

The results of the mixed-effects regression (see table 21) showed that being a part of group 2 had a negative and statistically significant influence on MBR (ß=-0.4167528, p=0.050).

The results of the random-effects and mixed-effects regressions examining the influence of high-level commitment on MBR showed that demonstrating a high level of commitment had a positive but statistically insignificant impact on MBR. The results of the fixed-effects and mixed-effects regressions examining the influence of high-level communication showed that demonstrating a high level of communication had a negative, but also statistically insignificant impact on MBR[15].

6. Discussion

Firms face increased pressure from their stakeholder and shareholders to increase their commitment to CSR and to transparently report on this commitment. While these activities are costly and time-consuming, they have been associated with an improved CFP. This relationship between CSR and CFP has opened up a new research field, which has been extensively explored over the past decades. However, most of the studies examining this relationship do not distinguish between CSR commitment and CSR communication in their assessment of CSR (Orlitzky et al., 2003). In the present study, this shortcoming is addressed and rectified. This thesis further contributes to the strand of research that critically addresses potential discrepancies between the level of CSR commitment and CSR communication of firms.

In this chapter, the descriptive and regression results of the main study are discussed first. Subsequently, the results of the two followup studies are debated. As two industries, namely the tobacco, and the integrated telecommunications services industry, were each represented by only one firm in the sample, no conclusions can be drawn from the results on these industries. Interpretations of these results are, therefore, not presented, as they would not be meaningful.

6.1. Main study

6.1.1. Descriptive statistics

The descriptive results of this study show that, contrary to what is reported in the literature, there was no continuous increase in the quantity of reporting and no continuous increase in the number of standalone CSR reports over time. However, this study only looked at the developments over

[13] The p-value indicated by the Hausman test (Prob > chi2 = 0.2971) was above the critical value of 0.05.

[14] The p-value indicated by the Hausman test (Prob > chi2 = 0.0839) was above the critical value of 0.05.

[15] An overview of these results can be found in Appendix A4. The models were, again, chosen based on the results of the Hausman tests.

Table 20: Level combinations on MBR: Random-effects regression results

	Coefficient	z	P>|z|
CombGroup			
2	-.3917638	-1.82	0.068
3	-.1982372	-0.67	0.506
4	-.0598091	-0.21	0.832
Industry			
10	6.075006	4.08	0.000
11	5.94829	2.29	0.022

Dependent variable: MBR
R^2=.5189
Number of obs.=392

Table 21: Level combinations on MBR: Mixed-effects regression results

	Coefficient	z	P>|z|
CombGroup			
2	-.4167528	-1.96	0.050
3	-.2169415	-0.74	0.462
4	-.0736784	-0.26	0.792
Industry			
9	3.625125	2.25	0.025
10	6.07751	5.03	0.000
11	6.166322	2.95	0.003

Dependent variable: MBR
Number of obs.=392

the past eight years. Stakeholders have been exerting pressure on companies to report on their CSR commitment for much longer than this. It is, therefore, possible that most companies had already reacted to this pressure and adapted their activities accordingly before 2011. This would explain the lack of an increase.

As mentioned in chapter 2, the MDGs, and therefore six of the examined CSR topics, were already established before 2011. The SDGs were first explicitly mentioned in the reports on the year 2016, which were published in 2017. There was no strong increase in hit counts for the newly introduced CSR topics in that year. The fact that these topics were already identified in the reports of the preceding years indicates that the keywords used to create the index for CSR communication breadth were chosen broadly enough to identify the content of the CSR topics, regardless of whether they were explicitly mentioned in connection with the SDGs. This assures the usefulness of this index to a certain degree.

The slight but continuous increase in CSR communication breadth suggests that firms have recognized the need to address a higher number of CSR topics in order to satisfy the demands of a wider range of stakeholders. In 2016, the first reports after the Volkswagen scandal were published. It is possible that companies were somewhat intimidated at the time and did not dare to make their CSR communication too broad. This would explain the sudden decrease in the breadth of communication in that year.

While the communication of many topics increased steadily over the observation period, the communication of some topics had its ups and downs in certain years. This supports the assumption that the content and focus of CSR are continuously changing, most likely in line with the altering interests and priorities of stakeholders and shareholders. these priorities are often influenced by trends or specific events (e.g., the increased media coverage of climate change, the scandal surrounding Harvey Weinstein, or the most recent “Fridays for Future” marches). (Schaltegger et al., 2006) A general decline in the communication of most topics could be observed in 2016. Few topics defied this decline. These topics may be considered as most important, defying trends in communication strength. Topics whose communication experienced a particularly sharp decline during such a period may be considered least important. Therefore, they are the first to fall victim to the trend of communication cutbacks.

The energy and pharma industry reported most broadly on their CSR activity, while the real estate industry reported the least broadly. The nature of the energy industry is already tied to a CSR topic, which they will naturally communicate extensively on. The energy industry, depending on the focus of their business, can either be perceived as conductive or constructive to sustainability. Therefore, firms might want to elaborate on their responsible business practices, clarifying their commitment to CSR. The pharma industry suffers from a controversial reputation, often being described as "cutthroat". The products of the firms in this industry are often ingested directly and are crucial to the health of consumers. Therefore, being seen as reliable and responsible, is very important to this industry, which might explain their broad CSR reporting.

The industries which reported the most with regard to reporting quantity were the oil and gas, and the insurance industry. The oil and gas industry suffers from a bad connotation, being prone to scandals like oil spills and fracking controversies. Therefore, it makes sense that firms from such an industry would try to improve their image with stakeholders and lower their riskiness perceived by shareholders through long and detailed CSR reporting. The insurance industry would very much profit from a reliable and responsible image, as people, to a certain degree, trust this industry with their physical and financial livelihood. Literal contracts are being made between firms in this industry and its customers. As explained in the previous, a moral contracting partner is a desirable contracting partner. Companies in this industry may, therefore, make the extra effort of long CSR reports to establish the reputation of holding themselves to high moral standards. The industries with the least voluminous CSR reporting were the food processing and retailing, the pharma, and the real estate industry. The food production and retailing industry might consider their products as too essential to feel the need to excessively report on their CSR activities. As the pharma industry scores very high on the breadth of communication, it could be argued that the firms in this industry prioritize the content of reporting over the quantity of reporting or simply feel that it is better to communicate their CSR in a broad but concise manner. Again, the real estate industry is among the industries that communicate the least. It, therefore, appears that CSR reporting is generally considered as not too important in this industry.

The topics that were communicated the most were “peace, justice, and strong institutions”, “affordable and green energy”, “climate action”, and “responsible consumption and production”. Climate change has been a very prominent topic over the past years. Both “affordable and green energy” and “climate action” are closely tied to this topic, while “responsible consumption and production” is also linked to it to some degree. Even if the topic of “peace, justice, and strong institutions” seems to be on a superordinate level to that of companies, issues such as human rights, corruption, and bribery were increasingly addressed in company reports. These are problems that directly affect companies or even emanate from them.

The topics that were communicated the least were “life below water”, “reduced inequalities”, “no poverty”, and “life on land”. The fact that poverty alleviation has been placed as the first SDG was interpreted by some researchers (e.g., Hoque et al., 2018) as an indication that this topic was of the most importance. Companies do not seem to agree with this interpretation. They may see such a topic as not their responsibility but that of policymakers. The same might be the case for the topic of "reduced inequalities", which deals with the reduction of inequalities within and among countries. Companies seem to give high priority to issues related to climate change as they seem to communicate them extensively. The topic of "life on land", which deals with the protection of forest areas and land degradation, may, therefore, seem redundant or too specific to them, as they have already addressed climate change by discussing other topics. None of the industries in our sample had a direct connection to the ocean. Therefore, the topic of "life below water" may not have been particularly relevant for the companies investigated. If companies in, for example, the shipping industry had been investigated, the result might have been different.

Companies with a higher number of employees communicated in higher quantity and more broadly than smaller firms. With greater firm size, usually comes a greater amount of both internal and external transactions (Godfrey et al., 2009; Kimberly, 1976). Due to the more considerable breadth and volume of a company’s transactions, it will probably have an impact on more CSR topics, which can then be reported. Besides, CSR reporting can be a significant cost factor (Oberndorfer, Schmidt, Wagner, & Ziegler, 2013). It could be argued that large companies simply have more resources to spend on CSR reporting.

The industries with the highest ESG scores were the real estate, the energy, and the insurance industry. While the energy industry also communicates extensively, the real estate industry was among those industries that communicated the least (in breadth and quantity). It makes perfect sense for industries like the insurance, and energy industry, that scores high in the ESG assessment to also generously report its efforts. However, it is surprising to see that an industry that has been found to act responsibly would not want to report on its CSR commitments.

Personal products are products with high visibility that are directly used by the consumer. This puts them under constant surveillance. Consequently, the motivation to manage their CSR commitments could be accordingly high. This could explain the high frequency in which firms in the personal products industry won sustainability awards.

6.1.2. Regression results

The results did not differ significantly between the fixed-effects, random-effects, and mixed-effects models. In a few cases, the p-values differed slightly between the models, while the direction of the effects remained the same. This is due to the differences in the way the models transform the data (Baltagi, 2005). In these cases, the influences were interpreted as tendencies. Overall, the results can be considered to be satisfactorily robust, and can, therefore, be interpreted and discussed.

The results of this thesis suggest that CSR commitment has no significant influence on accounting-based CFP. This could be explained by the fact that investments in CSR commitment are often not immediately visible, and most likely do not affect accounting-based CFP instantaneously. The effect of those investments might, therefore, only become apparent after several years (K.-H. Kim et al., 2018). Interestingly, while not being significant, the effect of CSR commitment on accounting-based CFP was actually negative. The attempt to satisfy all the interests of different stakeholder groups can lead to an inefficient use of resources and a decrease in CFP in the long run (Aupperle, Carroll, & Hatfield, 1985). Although irresponsible corporate behavior can have a negative influence on the relationship of firms and their stakeholders and might diminish a firm's public reputation, it can still generate value for the firm as it is often associated with cost-saving (Mani & Wheeler, 1998; Strike, Gao, & Bansal, 2006; Tang, Qian, Chen, & Shen, 2015). An example of this would be the use of nonrefined oil, causing environmental pollution, while saving operating costs at the same time (M. Kim & Kim, 2019). Therefore, the costs of CSR commitment could put socially responsible companies at an economic disadvantage (Ullmann, 1985), explaining the results.

The results also revealed that CSR commitment has a negative influence on market-based CFP[16]. Considering the small sample size, the p-value of the influence of winning a sustainability award on market-based CFP was not too far from being statistically significant. There-fore, the effect deserves to be mentioned. Previous research shows that firms have been punished on the stock market for the inclusion in a sustainability stock index. Investors might suspect that these firms spent too much on CSR, and that, as a consequence, more profitable projects might be overlooked or underfunded by the firm. (Oberndorfer et al., 2013) Being awarded a sustainability prize may give the same impression to stakeholders. They might fear that a firm is not distributing its resources economically, making the firm a less attractive investment option.

CSR communication has an influence on both accounting-based and market-based CFP. The results show a clear tendency that the publication of a standalone CSR report is perceived positively by stakeholders, while shareholders seem to be indifferent towards it. CSR reporting is not a one-time decision but requires continuous assessment and management of a firm's practices with regard to CSR (Székely & Knirsch, 2005). Stakeholders might, therefore, see a standalone CSR report as a clear sign that a firm actively thinks about and evaluates its CSR commitments. This could be different for shareholders, as they draw essential information from the annual reports of companies, which are later incorporated into their investment decisions. It is said that shareholders are the main audience for annual financial reports (Murray et al., 2006). If information about CSR reports is now incorporated into what were previously purely financial reports, this information would automatically be read by shareholders. Therefore, it probably makes little difference to shareholders whether a standalone CSR report is published or not.

High levels of CSR communication quantity affect both accounting- and market-based CFP negatively. Excessive quantities of CSR communication might not always be perceived as a sign of transparency by stakeholders and shareholders, but rather raise suspicion about the sincerity of the reporting and the factual correctness of the reported data (Dando & Swift, 2003; Doane & Potts, 2000). Overly lengthy CSR reports could, therefore, cause the opposite of the desired effect, making the firm look insincere and untrustworthy. This adversely affects a firm's relationship with its stakeholders, which might lead to stakeholders withdrawing their support and resources from the firm. Untrustworthy firms are also perceived to be a riskier investment option (Alexander & Buchholz, 1978). Financial market participants will, therefore, be more reluctant to invest in such a company. All of these reactions would lead to weaker CFP.

The breadth of CSR communication has no influence on accounting-based CFP. Stakeholders might already be content with the mere existence of a CSR reporting and might not deal with the contents of the reporting in great depth. The breadth of the CSR topics that are being addressed in the reports would, therefore, not be recognized, explaining the non-existent effect.

In contrast to accounting-based CFP, addressing a broad range of CSR topics has a positive influence on a firm's market-based CFP. Financial market participants are on a constant quest for information that can be incorporated in their risk assessment of risks and decision-making processes (Malsch, 2013). CSR is considered to play a part of a firm's risk management (Michelon et al., 2020). Firms with a broad CSR communication appear to act responsibly in many different areas. This minimized the risk of misconduct in one CSR area, which would, if discovered, result in a public scandal. Also, broad CSR communication gives the impression that the firm in question is already adhering to CSR standards, which are above the legal requirements in many different business areas. This minimizes the risk of the firm being hurt by any new legislation or regulations concerning CSR standards. Scandals or the burden of adjusting operations or production to new laws would harm a firm financially, putting shareholders at a disadvantage. Companies that present themselves as exemplary with regard to CSR would, therefore, be considered a more attractive investment option.

It is often assumed that shareholders are not only the main audience of financial reports, but also of CSR reports, and that other stakeholders seldomly pay attention to these disclosures (Murray et al., 2006). The results of this thesis suggest that CSR reports are also perceived and evaluated by stakeholders. However, it is interesting to see that the presence of a standalone CSR report has an impact on accounting-based CFP, while it is the content of the reporting that influences market-based CFP. This reaffirms the assumption made before that that shareholders deal with the reports in more depth, while stakeholders react to more noticeable and quickly assessable parameters.

[16] Although ESGScore technically had a positive influence on MBR, it was so small and statistically insignificant that it will not be considered.

6.2. Follow-up studies

6.2.1. Follow-up study 1

As CSR communication breadth did not have an influence on accounting-based CFP, it was no surprise that no single CSR topic had a significant influence on accounting-based CFP either. This supports the assumption that the content of CSR reports is not particularly relevant to stakeholders or that they simply do not read the reports in detail. Many stakeholder groups, like customers or NGOs, have no direct financial stake in the companies. If a company evokes a scandal, in most cases, it is easy for customers to just switch to an alternative brand. The consequences of such a scandal would be much more severe for shareholders. Therefore, stakeholders might just not inform themselves about the activities of companies in the same vigorous manner as shareholders.

Three CSR topics had a positive influence on market-based CFP. These topics were "reduced inequalities in and among countries", "gender equality", and "affordable and clean energy". The communication of the topic of "reduced inequalities in and among countries" had the most considerable influence. While not many firms communicated on this topic, the extra effort to take up this ambitious goal seemed to resonate well with shareholders.

As gender equality has been a critical topic in recent years, it was not surprising that shareholders would act favorably towards firms that show concern and engagement in this issue. Women's marches and the "#metoo" movement are only a few prominent examples of recent initiatives to improve women's standing in society and the business world. Showing support of this movement is almost expected from firms nowadays and rewarded by shareholders. Scandals revolving around the mistreatment of women are no longer affordable for companies in this age. As was seen in the case of "The Weinstein Company", multimillion-dollar compnies can be plunged into insolvency by serious and confirmed allegations. Not to take a clear position on or to lack commitment in this problem could lead to a reputational loss of a company, while being vocal on this issue seems to improve reputation.

The topic of the energy system transformation has been very relevant for some time now, especially due to the decision of some European countries to participate in the nuclear power phaseout in recent years. Therefore, it is not surprising that shareholders seem to value a firm's engagement in this area. Renewable energy sources are often considered as a way of saving costs and consequently improving CFP in the long term. It is, therefore, also in the interest of shareholders when a company addresses this issue.

The topic of "industry, innovation, and infrastructure" had a negative influence on market-based CFP. The goal of this topic is to "build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation" (United Nations, 2016, p. 17). This ambitious topic could be seen as too high a cost factor, explaining the negative impact on market-based CFP. Also, it usually takes some time for innovations to break even financially. The initial reactions to such investments might, therefore, be a bit skeptical.

6.2.2. Follow-up study 2

The descriptive results of this study show that there is indeed a large number of firms that display a communication-behavior gap when it comes to their CSR activities. Rules and regulations on CSR reporting, as well as the verification of its content, are evidently not strict enough as firms do not seem to be scared of being discovered and punished for their behavior.

No constellation of the displayed levels of commitment and communication had a statistically significant influence on accounting-based CFP. Displaying low levels of both CSR commitment and CSR communication was the only combination that showed a positive, yet still insignificant, influence. Looking at the levels separately, both displaying a high level of CSR commitment or a high level of CSR communication had a negative but statistically insignificant influence on accounting-based CFP. Although they are not significant, the results indicate that CSR commitment and CSR communication both represent high costs for a company that may not be offset by the benefits of good stakeholder relationships. The results also suggest that stakeholders do not seem to be aware of any discrepancies between CRS commitment and CSR communication of firms. This, again, supports the assumption that stakeholders do not concern themselves with the CSR actions of firms in much depth.

Displaying a high level of CSR communication while displaying only low levels of CSR commitment has a negative influence on market-based CFP. This indicates that shareholders see behind the facade of extensive CSR communication and punish those firms that, intentionally or unintentionally, try to deceive the public. This can be attributed to the fact that shareholders are more deeply concerned with the CSR activities of companies, as they are financially involved with them, and any misconduct on the side of the companies can come at a high cost for shareholders.

7. Limitations and further research opportunities

Although the results of this study are intriguing, as with any research, some limitations must be evaluated. These limitations raise the possibility for further research, which will also be elaborated.

There are some limitations concerning the choice and construction of the variables. Compromises had to be made on one independent and one control variable due to access and availability difficulties. The number of articles on a firm on the Handelsblatt website does not measure the same thing as marketing expenses, with regard to firm visibility. Firms spend money on marketing to make themselves appear in a favorable light, while their portrayal in articles is mostly out of the firms' hands. A high visibility in the economic media does not necessarily mean a good thing for the firm.

There are also some concerns about the ESG Combined Score. While the Thomson Reuters claims to use the same method as ISS ESG to investigate firms and compose the final score, when looking at the few ISS ESG scores which were made public, considerable differences could be found between the final scores. Another concern with the ESG Combined Score is that, while the methodology behind this score is thorough and its coverage wide, it might not be completely appropriate as a metric. ESG information is often published in the non-financial part of reporting. As firms' ESG disclosures can vary considerably, ESG data might not be generally comparable (Dinçer & Yüksel, 2018). While the rating's methodology goes beyond the review of voluntary disclosure, Thomson Reuters does use some information that has been published by the firms under question themselves (Thomson Reuters, 2013), and it is not clear how strongly the rating is based on this disclosure (Beck et al., 2018).

It is also not clear whether ESG scores, like the Thomson Reuters ESG Combined Score, are actually comprehensible to stakeholders and shareholders (Luo et al., 2015), and, therefore, how useful they are as a variable. It should, therefore, be considered whether ESG scores, which are so often used in research as a proxy for CSR commitment, represent effective indicators for CSR commitment. Also, as different operationalization of CSR commitment measures has shown to lead to different results about the relationship between CSR and CFP (Busch & Hoffmann, 2011), it should be examined if and how the results of this study change if the variable representing CSR commitment is based on alternative sources for CSR validation, which do not rely on an ESG database (Singal, 2014).

There were also some limitations concerning the statistical method. While the values for R^2 of the random-effects regression models were decent, the R^2 values of the fixed-effects models were very small. Therefore, the variables in the model do not explain a big proportion of the variation in the dependent variable. This could indicate that important independent variables have were omitted. There has long been a critical debate about the information content and usefulness of R^2. King (1986) argues that R^2 is a poor measure and highly misused. Therefore, this limitation might not be too severe. However, future research should pick up on this and include new variables that the researchers consider significant. Such an inclusion of further variables, like, for example, R&D investment, might also lead to the relationship between CSR and CFP being no longer statistically significant (McWilliams & Siegel, 2000).

Additionally, the results of the random-effects, fixed-effects models, and mixed-effects models displayed a few discrepancies, mainly concerning the p-values. Therefore, the influence of some variables had to be interpreted as tendencies. Future research could pick up on this and see whether the p-values are still different when the sample size is increased.

There might also be a causality issue in this study. CSR commitment and communication might not just be a predictor but also a consequence of CFP, forming a sort of circle (Surroca, Tribó, & Waddock, 2010; Waddock & Graves, 1997). In future research, the models presented in this paper could be modified accordingly and then tested again.

Furthermore, the eight-year period of this study was not long enough to produce generalizable results. Therefore, one should be cautious when deriving inference from these findings (Choi et al., 2010). The same limitation arises from the relatively small sample size. A followup study over a longer time frame with a bigger sample size should be conducted to see if the results can be replicated. Also, all the firms in the sample belonged to the 80th percentile of their industry with regard to market capitalization and were publicly traded. The results might, therefore, not apply to small and privately-owned companies. It would be interesting to see whether the results are different for firms with a smaller market capitalization.

Finally, the present study could be replicated on a much larger scale to shed further light on how different stakeholder groups perceive CSR. Different stakeholders display differing expectations concerning a firm's behavior (Fombrun et al., 2000). Some stakeholder groups might be more prominent in one industry than in the other. Therefore, the effect of different types of CSR activities on corporate reputation and, consequently, CFP, might differ between industries (Rodriguez-Fernandez, 2016). It would be interesting to repeat this study with different samples, each containing companies from one industry. This would make it possible to assess whether the stakeholders of companies in one industry have different CSR priorities than those of another industry.

8. Implications

8.1. Theoretical contribution

The relationship between CSR and CFP has been the center of debate in research for decades now. Many studies draw on stakeholder theory to explain this relationship (Donaldson, 1999; Freeman, 2010; T. M. Jones, 1995). According to instrumental stakeholder theory, firms with outstanding social performance also have the tendency to perform better financially (Baron, 2001; T. M. Jones, 1995). This study adds to the literature on instrumental stakeholder theory, showing that companies that respond to the desire of their stakeholders and shareholders for more CSR-related information can benefit from an increased CFP. Many studies in this research area have failed to distinguish between CSR commitment and CSR communication when quantifying CSR and treated these activities synonymously. The results of this thesis make it clear that there are often great discrepancies between the levels of CSR commitment and CSR communications. These findings support the literature on the communication-behavior gap, although they do not support the notion that this gap has widened over the past couple of years. The results also partly support the literature on the risks of allegations of greenwashing, and the damage they do on corporate reputation. They do, however, expand on this by revealing that untrustworthiness is primarily based on the quantity of communication, while the breadth of communication seems to be beneficial.

While the role of the quantity of CSR reporting has been researched widely in the existing investment literature (Dhaliwal et al., 2012), the content of this reporting has not received an equal amount of attention (Harjoto & Jo, 2015). This work contributes to the neglected re-search area. The index for the breadth of CSR communication, which was created especially for this work, also offers a tool for the assessment of the content of CSR reports in future re-search.

8.2. Practical implications

The results of this thesis provide interesting and important practical implications. Many prior studies have debated the question of whether firms should invest in CSR commitments and the reporting of these (Orlitzky et al., 2003). While no clear statements can be made about the benefits of CSR commitment, conclusions can be drawn about CSR communication.

The preparation of CSR reports is expensive and time consuming, and managers are often not entirely sure if these publications evoke the aspired information dissemination (García-Sánchez et al., 2019; O'dwyer, 2002). The results of this work indicate that CSR reports are indeed perceived and valued by stakeholders and shareholders. The literature often cites shareholders as the most important audience for annual and CSR reports (e.g., Murray et al., 2006). Although the results suggest that shareholders are more interested in the content of these reports, it is evident that these reports also influence the other stakeholders. Companies can therefore be advised to continue preparing and publishing CSR reports.

The high percentage of companies that communicate extensively about CSR activities but display little actual CSR commitment shows the lack of verification of CSR reporting. Urgent work should therefore be done on regulations that control what and how much companies publish with regard to their CSR commitment. While CSR communication triggers a reaction in stakeholders and shareholders, they do not seem to be aware of CSR commitment. CSR commitment comes at a high cost for the company, but its manifestations are often barely visible and difficult to assess. New rules and regulations regarding CSR communication must guarantee that only companies with a high level of commitment are able to engage in high level communication, so that stakeholders and shareholders can rely on the information presented to them in their assessment of firms. However, it is reassuring that at least shareholders seem to see through excessive communication on CSR issues on the part of companies. Companies are therefore urged to keep to the truth when communicating CSR issues. Nevertheless, these results should not merely scare dishonest companies into refraining from swindling about their sense of responsibility. They should also serve as an instruction for honest companies on how to communicate their CSR commitment effectively, as this seems to pose a challenge to many (Adams, Potter, Singh, & York, 2016; Qiu, Shaukat, & Tharyan, 2016). Producing shorter CSR reports with a higher information content could not only improve the image of the company among stakeholders and shareholders, but also possibly save the company time and money. However, it is questionable whether, based on the results of this work, firms should be advised to communicate more on or even exclusively specific CSR. Companies should rather get an overview of which CSR topics are particularly important to their stakeholders and shareholders. Based on this information, efforts and resources can then be allocated to the individual topics.

9. Conclusion

The main objective of the presented work was to examine whether CSR commitment and CSR communication, separately, have an influence on CFP and if their influences differ in direction and strength. 656 annual and CSR reports were analyzed to create precise variables to test these relationships. Through this accurate and extensive data collection, this thesis contributes significantly to the debate on the relationship between CSR and CFP. A panel data analysis on 49 European firms over an observation period of eight years was then conducted. The results of this analysis revealed that while CSR commitment has no impact on CFP, the relationship between CSR communication and CFP is somewhat more complicated. While standalone CSR reports and broad communication on CSR topics are positively received by stakeholders and shareholders, respectively, both groups are opposed to high quantities of CSR reporting.

The results of the main and the followup studies suggest that shareholders concern themselves with the CSR actions of companies more deeply than stakeholders. The communication of different CSR topics also influences market-based CFP differently. In addition, displaying high levels of communication while displaying low levels of commitment has a negative influence on market-based CFP. This indicates that, while shareholders appreciate CSR reporting, they do not appreciate being deceived. Overall, the results of the main, as well as the followup studies, suggest CSR reporting can help a company to satisfy its stakeholders and shareholders and, therefore, improve CFP, but firms have to dread carefully not to be perceived as dishonest.

The CSR activities of companies are increasingly moving into the focus of stakeholder groups. While these activities are known to involve costs for companies, they are also associated with higher CFP as they are a means of improving stakeholder relationships. The clear categorization of CSR activities into commitment and communication and the separate examination of accounting-based and market-based CFP in this work revealed new insights into this relationship between CSR and CFP. Relying on the findings of this thesis, the two initial questions have to be answered: Does it pay to actually be good? Not really. But does it pay to deceive? Definitely not!

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