The relationship between the quality of CSR reporting and Firm Value
- The mediation role of Analysts

Evidence from the Netherlands

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Date:	20 June 2019
Version:	Final version

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Abstract

This thesis examines the relationship between the quality of CSR reporting and firm value with incorporating the mediation role of analysts. A panel dataset is composed from Dutch listed firms during the time period 2013-2017, which resulted in a total of 200 observations. The results show mixed and non-significant relationships between CSR reporting quality and firm value; therefore the mediation role of analyst cannot be supported by the results. However, the effect of CSR reporting quality on analyst recommendations and the effect of the analyst recommendations on firm value were significant. And when the analyst recommendation was added to the relationship between CSR reporting quality and firm value, the effect of CSR reporting quality on firm value mainly decreased. This means that only the direct and significant effect between CSR reporting quality and firm value to satisfy the mediation role of analysts lacks. The results stress the importance of the quality of CSR reporting towards firms, because the quality of the CSR reports plays a significant role in the stock recommendations of analysts to investors. This could be valuable to the managers of the firms, because the analyst recommendations significantly affect the firm value.

Keywords: Quality of CSR reporting – Firm value – Analyst recommendations – Panel study

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1. Introduction

The last decade many researchers increasingly argue the importance of Corporate Social Responsibility (CSR) reporting (Greenfield, 2004; Maignan & Ralston, 2002). The core definition of CSR is as follows: "the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society" (Bowen, 1953). The increased importance of CSR reporting is due to the problems the world faces, such as climate change and loss of natural resources (IPCC, 2008). These upcoming problems stress the importance of the responsibilities for firms with respect to environmental and social issues. The study of McWilliams et al. (2006) found that investors are nowadays more focussed on the CSR performance of firms. The CSR performance is: "a necessary strategy to enhance consumer perception of firms' product quality and companies reputations" (Chun & Shin, 2018).

The study of Gates (2013) found evidence that investors want to invest in more sustainable-aware firms, this means that CSR performance affects firm value. Firm value is referred to as the financial performance of the firm. The CSR performance of firms is the main content of the CSR reports, which shifts the focus towards CSR reporting. The quality of CSR reporting is determinative for the amount of investments in the firm, according to the study of Hummel & Schlick (2016). Firms with a high quality of CSR reporting are likely to receive more investments compared to firms with a low quality of CSR reporting. The amount of investments in a firm affects the value of a firm; therefore the link between CSR reporting quality and firm value is established. To examine the CSR reporting quality, first the underlying motive of firms to disclose CSR information must be penetrated.

In general, firms disclose CSR information to inform investors about their CSR performance (Hummel & Schlick, 2016). Previous research showed two theories could be the underlying motive to disclose CSR information. The voluntary disclosure theory suggests that a firm with high-level CSR performance is more likely to disclose information about CSR performance to strengthen the firm's market value (Deegan, 2002). Meanwhile, the legitimacy theory predicts that a firm with low-level CSR performance is incentivized to disclose more information about the CSR performance to hide the actual poor CSR performance (Mousa et al., 2017). A contradictive relationship is present in both theories; both theories argue that firms would disclose extensive CSR information, but the underlying motive differs.

These different motives lead to a perception issue for investors. Investors are unable to predict the actual CSR performance; meaning investors are unable to make a distinction between low and high-performing firms on CSR issues. The study of Luo et al. (2015) found that investors incorporate the CSR performance into their investments decisions, which leads to an inaccurate estimation of the firm value. The question arises: how can investors make accurate investment decisions based on the CSR reporting if both low and high CSR-performing firms disclose extensive CSR information? This perception problem for investors means that there is information asymmetry between the general investor and the firm regarding the CSR performance of a firm.

Despite the availability of CSR reports, the information is too complex to be directly understood by a general investor. The study of Luo et al. (2015) found a solution for the perception problem for investors; this study attempted to solve this problem by adding analyst recommendations to the relationship between CSR performance and financial performance. Analysts are focused on available data of a firm, which includes financial statements, earnings related to disclosure information and other announcements (Chun & Shin, 2018). "Investors usually cannot analyse whole of the investing firm, so analysts have a significant influence on investor behaviour by giving up-to-date information to the investor" (Graham et al., 2005). Therefore, the recommendations of analysts are taken into account in the relationship between CSR reporting quality and firm value. This is conducted to reduce the information asymmetry between the general investor and the firm regarding the CSR performance of a firm.

The buy or sell recommendation of analyst are indicative for a positive or negative opinion from analysts towards the purchase or sale of the firm's stock. As described before, analysts incorporate corporate social performance into their stock recommendations (Luo et al., 2015). The buy or sell recommendation influences the relationship as a mediation effect. This is due to the expectation that CSR reporting quality affects the buy or sells recommendation from analysts to investors, which means that a higher CSR reporting quality enables analysts to retrieve more detailed information about the CSR performance of a firm. When analysts are better able to rate the CSR performance, it is more likely that the particular firm receives a buy recommendation. Therefore, the expectation is that CSR reporting quality affects the firm value through the buy or sell recommendation of analysts. This leads to the following research question: *What is the relationship between CSR reporting quality and firm value and how is this relationship influenced by analysts?*

To provide an answer to the research question, the Dutch firms listed on the AEX, AMX and ASCX that are actively participating on CSR related issues are included, which are in total 40 firms. These firms are chosen because of their international activities, and therefore the presence of the required data of the international guidelines of GRI. The time slot is determined at 5 years (2013 – 2017), this results in a total of 200 different observations. The starting year is set, because in 2013 the Dutch government stressed that CSR activities pays off (SER, 2013). This signal affected the increased interest of Dutch firms regarding CSR activities.

The study of Luo et al. (2015) proposed a mediation role for analysts in the link between CSR performance and financial performance. This research focuses on the CSR reporting quality instead of the score of CSR performance, due to evidence that the quality of CSR reporting is determinative for the amount of investments in a firm. The study of Hummel & Schlick (2016) found that investors base their investment decision mainly on the delivered quality of the CSR reports. The contribution of this research is that it provides evidence of the importance of the quality of CSR reporting on firm value. The evidence of this research provides an indication for firms about the value-enhancing role of the quality of CSR reports. Summarizing, this research contributes to the study of Hummel & Schlick (2016) by gathering evidence of their statement that CSR reporting quality is determinative for the amount of investments. And this research contributes to the study of Luo et al. (2015) by testing if the mediation effect is also present in the link between CSR reporting quality and firm value.

The following sections are classified as follows: Section two provides an extended overview of the literature. The theories are elaborated and developed into different hypotheses. Section three reviews the methodology and describes how the variables are operationalized and the relevance of the research method is explained. Section four explains the results of this research and finally section five describes the conclusion and discussion.

2. Literature overview and hypotheses

To examine CSR reporting it is important to elaborate on the concept of CSR, because CSR is used interchangeably among different studies. Therefore, several studies attempted to define CSR, the study of Rahman (2011) provided ten dimensional points on CSR definitions that summarizes the core CSR concept, these are: obligation to society, stakeholders involvement, improving the quality of life, economic development, ethical business practice, law abiding, voluntariness, human rights, environmental protection, transparency and accountability. The ten dimensional points show that the essence of engaging in CSR is tagged as "doing good to do well" (Moura-Leite & Padgett, 2011). The CSR performance is defined as to what extent a firm is committed to the CSR concept in their business activities. Firms disclose CSR reports to inform investors about their CSR performance (Hummel & Schlick, 2016). The studies of Clarkson et al. (2008) and Mousa et. al. (2017) showed two disclosure theories that incentivize firms to disclose CSR reports; these are elaborated below.

2.1 Disclosure theories

Disclosure theories are often used to determine the relationship between CSR reporting and CSR performance (Clarkson et al., 2008; Dhaliwal et al., 2011). The two most present theories to examine this relationship are the legitimacy theory and the voluntary disclosure theory. The underlying reason to establish several theories about the relationship between CSR disclosure and CSR performance is that the underlying motive of a firm to disclose CSR information differs. The voluntary disclosure theory is used to discover the underlying motive why firms voluntary disclose the CSR information (Clarkson et al., 2008). The study of Clarkson et al. (2008) proposed a notion that high-level CSR performance will convey their type by pointing to objective CSR performance indicators which are difficult to simulate by inferior type firms. This inferior type firms will choose to disclose less CSR information. Meaning, that the outcome suggests that firms with high-level CSR performance are more likely to disclose CSR information to strengthen the firm's market value. And the firms with a low-level CSR performance are unable to simulate the same indicators in their CSR information. In the voluntary disclosure theory, the firms with a high-level CSR performance are clearly separated from the firms with low-level CSR performance because firms with low-level CSR performance disclose significantly less CSR information (Clarkson et al., 2008).

The voluntary disclosure theory suggests that firm with a high-level CSR performance disclose more CSR information compared to firms with low-level CSR performance. However, the legitimacy theory provides an opposite explanation about the underlying motive to disclose CSR information. The legitimacy theory suggests that firms with low-level CSR performance are incentivized to disclose more CSR information to hide poor performance (Mousa, et. al., 2017). The study of Guidry & Patten (2012) showed that firms disclose a minimum of CSR information to prevent the investors from being informed about the actual poor CSR performance, this supports the legitimacy theory. Whereas, the voluntary disclosure theory suggests that the firm with high- and low-level CSR performance are clearly separated, the legitimacy theory argues that firms with low-level CSR performance increase their disclosure of CSR information to hide their actual performance (Guidry & Patten, 2012). The above-mentioned studies showed that the disclosure theories create contradictory results.

The study of Clarkson et al. (2008) found evidence that the two disclosure theories do not result into a clear explanation about the motive to disclose CSR information. Therefore, Clarkson et al. (2008) called for a revisiting of the conjecture that the legitimacy theory and the voluntary disclosure theory are mutually exclusive. The study of Hummel & Schlick (2016) responded on this call, and conducted research on the link between CSR performance and the quality of CSR related issues. The results supported the voluntary disclosure theory, as it stated that a higher level of CSR performance led to a higher quality of CSR related disclosures. However, also a negative relationship has been proven between CSR performance and lower quality of CSR disclosures, which supports the legitimacy theory. Main reasoning behind this outcome is that poor CSR performers avoid transparency to protect their image as sustainable firms.

The main conclusion is that the link between CSR performance and CSR reporting quality depends heavily on the CSR performance of a firm. Meaning, “the empirical evidence regarding this relationship is mixed, which indicates that the two theories are not necessarily contradictory but that they are instead two sides of the same coin” (Hummel & Schlick, 2016). This research follows this view, which means that not the amount of information but the quality of CSR reporting is determinative for the amount of investments based on the CSR performance of firms. Meaning that the quality of CSR reporting is the most important indication for investors to discover the CSR performance of a firm. Therefore, the focus of this research is shifted towards the quality of CSR reporting.

2.2 CSR reporting

2.2.1 CSR performance

The evidence that the quality of CSR reporting is determinative for investors to discover the CSR performance of a firm results into a prevalent focus on the quality of CSR reporting. To examine the importance of the quality of CSR reporting, first it is important to determine the relevance of CSR performance towards firm value, because the CSR performance is the main content of the CSR reports. A study focused on the top 100 sustainable global firms showed a significant higher sales growth, return on assets, profit before taxation, and cash flow from operations compared to the control firms in the same period (Ameer & Othman, 2012).

However, the study of Hassel et al. (2005) about how environmental information is processed in the firm value of listed Swedish companies showed opposite results. It showed a negative relationship between CSR performance and the market value of the firms. Nevertheless, the researchers stated that based on the motivation of this research, it can be concluded that the environmental information is value-relevant information (Hassel et al., 2005). However, as described before a positive relationship between CSR performance and firm value was also found. This relationship was supported by the resource-based perspective, which means that firms capable of investing heavily in CSR performance have greater underlying resources that lead to higher financial performance (Waddock & Graves, 1997).

When looking at the empirical evidence about the effect of CSR performance on the firm value, more evidence support the positive relationship. Also the study of Van Stekelenburg et al. (2015) supports the positive relationship between CSR performance and firm value. Also in the study of Lourenço et al. (2012), important findings are that the focus should not be on the CSR performance itself. This is due to the fact that the results showed that the investors do want to punish firms with large profits and a low-level of CSR performance (Lourenço et al., 2012). These firms are often described as sustainable-aware firms, because their strategy implies this. Due to their misleading strategy, investors do not want to invest in these firms and thereby punish them.

The varied results about a positive or a negative relationship between CSR performance and firm value could be explained by the fact that investors do not react on each separate category of CSR performance. The study of Jacobs et al. (2010) showed that the market positively reacts on the announcement of philanthropic gifts for environmental causes, while the market negatively reacts on voluntary emission reductions Meaning, that investors value not all categories of CSR improvements positively.

2.2.2 CSR reporting quality

The reporting of CSR information about CSR performance is often not taken into account. Researches assumed that CSR scores are the only sources to gather information regarding CSR performance for investors. However, Clarkson et al. (2013) showed that CSR reports are an important source of information to investors. The study argues that voluntary CSR reports generate valuation relevant information and that each disclosure category is similar in value relevance about the firm's environmental strategies. When acting in line with their strategy, the firm's stock returns will be positively affected by the CSR reports (Clarkson et al., 2013). The evidence that the disclosure of CSR performance is more important than CSR performance scores itself, lead to the focus on CSR reporting quality of this research.

To determine the effect of CSR reporting quality on firm value, it is important to find a solution for the perception problem for investors. The perception problem means that there is information asymmetry between the general investor and the firm regarding the CSR reports. The general investor is not able to process all CSR information, because this information is multidimensional in nature and hence generally complex. The study of Luo et al. (2015) proposed a mediation role for analysts to solve the information asymmetry. The results showed that analysts incorporate CSR information in their stock recommendations towards the general investors, which significantly reduces the information asymmetry.

Previous research pointed out that CSR disclosure is value relevant, when certain criteria are met (Clarkson et al., 2013; Dhaliwal et al., 2011). Value relevant disclosures mean that it has incremental value over the current CSR scores that are already available to the investors. The value relevance of CSR information is proved, which means that the quality of CSR reporting is likely to have an effect on firm value. Therefore, this research attempts to find the relationship between CSR reporting quality and firm value.

The hypothesis of CSR reporting quality is based on the literature and includes three assumptions: higher quality of CSR reporting generates value relevant information (Clarkson et al., 2013), analysts incorporate CSR information in their stock recommendations towards investors (Luo et al., 2015), and investors reward firms with high-quality CSR reports (Lourenço et al., 2012). The investments in firms with high-quality CSR reports affect the particular value of the firm. Summarizing, this research expects a positive effect of higher quality of CSR reporting on firm value, leading to the following hypothesis: *H_1: A higher quality of CSR reporting positively affects firm value.*

2.3 The mediation role of analysts

The link between CSR reporting quality and firm value has been examined, however it generated no coherent results; the study of Hummel & Schlick (2016) found a positive relationship between the CSR reporting quality and firm value, while the study of Bachoo et al. (2013) found a significant negative relationship between CSR reporting quality and firm value. These contradictive results raised the call for an addition in the link between CSR reporting quality and firm value. Previous research showed that the effect of analysts plays an important role in the link between corporate social performance and corporate financial performance. The study of Luo et al. (2015) argues that analysts recommendations mediate the relationship between corporate social performance and firm stock returns by reducing the information asymmetry between the investor and the firm regarding the corporate social performance of a firm. The findings provide an information-based mechanism in the link between corporate social performance and corporate financial performance. The application of analyst recommendations as mediator in the link between CSR reporting quality and firm value is not yet examined.

The role of analyst is originated due to the complexity of CSR information, which is often too difficult to be directly understood by the general investors (Luo et al., 2015). Investors are restricted by time and resources to analyse the whole firm of interest, therefore analyst have a significant influence on the investments decisions by providing up-to-date information to the investor (Graham et al., 2005). Analysts do have more experience with determining the value of CSR disclosures and also have more access to private information of firms (Ivković & Jegadeesh, 2004). Previous research showed that financial analysts do pay a great deal of attention to CSR information and also process CSR into stock recommendations. This particular study proposes a mediation role for analysts in the link between corporate social performance and firm stock returns (Luo et al., 2015).

The role of analysts, as proposed by Luo et al. (2015), is the mediation role between corporate social performance and corporate financial performance. To mediate the relationship, this research focuses on the buy or sells recommendations of analysts instead of the number of analyst recommendations. The buy or sell recommendation is measured in a reversed Likert scale (1-5), which means that 1 stands for strong buy recommendation, while 5 stands for strong sell recommendation. This analyst recommendation is measured as the median consensus of buy-hold-sell recommendations provided by analysts to investors (Luo et al., 2015). As mentioned before, investors heavily rely on the stock recommendations of

financial analysts (Womack, 1996). Besides, analysts do factor CSR performance in their stock recommendations (Luo et al., 2015).

Therefore, this research proposes a mediation role of the buy or sells recommendation of analysts in the link between CSR reporting quality and firm value. A mediator is a variable that explains the relationship between the independent and dependent variable (Baron & Kenny, 1986). To establish a mediation role, the independent variable has to affect the mediating variable. The study of Luo et al. (2015) showed that CSR performance affects the analyst recommendations. This is due to the fact that analyst incorporate CSR performance into their stock recommendations to the general investors. The CSR performance of a firm is disclosed in CSR reports. The study of Hummel & Schlick (2016) demonstrated that firms with a superior CSR performance tend to disclose high-quality CSR reports. High-quality CSR reports enable analysts to factor more detailed CSR information into their stock recommendations, which means that higher quality of CSR reports likely lead to positive recommendation of analysts towards the general investors.

Therefore, it is expected that CSR reporting quality affects the buy or sell recommendations of analysts to the general investors. The mediation effect in this research: the effect of CSR reporting quality on firm value is explained through the analysts buy or sell recommendation, leading to the following hypothesis: *H_2: The buy or sell recommendation of analysts act as mediator in the relationship between CSR reporting quality and firm value.*

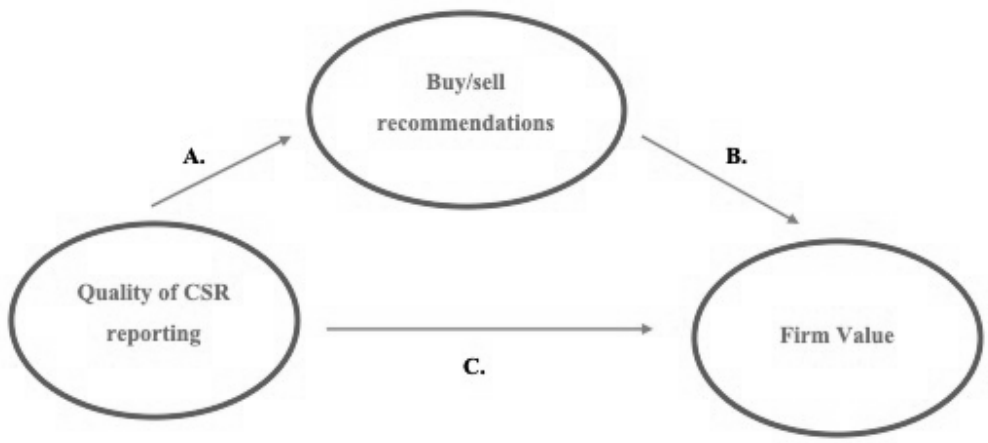

Figure 1: Conceptual Model

3. Methodology

3.1 Sample

The Netherlands is one of the leading countries worldwide on CSR disclosure. The latest update of the Countries CSR Ranking, the Netherlands is on position 7 out of the 60 examined countries (RobecoSam AG, 2018). Besides, the data used to measure the CSR disclosure quality is both from the Global Reporting Initiative (GRI) and the Transparency Benchmark (TB), both organizations are established in the Netherlands (Global Reporting Initiative, 2004; Transparency Benchmark, 2019). This establishment also indicates the importance of corporate CSR in the Netherlands. Therefore, the data used to test the hypotheses is gathered from 40 listed firms in the Netherlands.

The Dutch firms listed on the AEX, AMX and ASCX are examined. The required data to measure the firm value is retrieved from Thomson Reuters (2018). The condition for the Dutch firms was the disclosure of CSR reports and the assessment of the CSR reports by the GRI. The total of examined firms is 40. These firms are chosen because of their activities on CSR, and therefore participation in voluntary CSR disclosure. The data on GRI guidelines is only available for internationally operating firms, thus the examined firms are trading internationally. The time slot is determined at 5 years (2013 – 2017), this results in a total of 200 different observations. The starting year is set, because in 2013 the Dutch government stressed that CSR activities pays off (SER, 2013). This signal affected the increased interest of Dutch firms regarding CSR. The examined firms from the AEX, AMX and ASCX and the particular sector are viewed in the Appendix.

Index	Number of firms
AEX	25
AMX	25
ASCX	25
Total firms	**75**
Data GRI not present	35
Data GRI present	40
Total included firms	**40**

Table 1: Overview Dutch listed firms

3.2 Operationalization

3.2.1 Dependent variable: Firm Value

The dependent variable, firm value, should be included in different measures as robustness check. This is due to the fact that the effect of CSR reporting quality on one firm value measure possibly generates insignificant results (Abreu, 2016; Harrison & Wicks, 2013). The selected measures of firm value are based on previous research. These measures are the following: Earnings Per Share (EPS), Price Earnings ratio (P/E ratio) and Market Capitalization (Chung & Pruitt, 1996; Conheady et al., 2015; Poutsma & Braam, 2012). All the data used to measure the firm value is retrieved from Thomson Reuters (2018).

Measurements of firm value differ in the way its calculated, in particular the differences between the indicators based on accounting measurements or based on market-based measurements. Investors do not affect the internal situation of a firm; investors do affect the market performance of a firm (Lourenço et al., 2012). Therefore, in this research only the market-based indicators are taken into account. Market-based indicators are mainly influenced by events that were not foreseen or influenced by the management of a firm (Srivastava et al., 2006).

Dependent variables	**Proxy**	**Measurement**
Earnings Per Share (EPS)	Firm Value	Earnings / amount of shares outstanding
Price Earnings ratio (PE)	Firm Value	Current share price / earnings
Market capitalization (MC)	Firm Value	The current share price x the amount of shares outstanding

Table 2: Operationalization Dependent variable

3.2.2 Independent variable: CSR reporting quality

To measure the CSR reporting quality, two different measures are included. The underlying reason is that both measures involving different aspects of quality. The Transparency Benchmark (TB) rates the CSR report of firms on the particular transparency. The studies of Bruns et al. (2017) and Quaak et al. (2007) included the TB rates to measure the transparency of the CSR reports. The TB is not focussed on concrete activities of the results in the area of CSR (Transparency Benchmark, 2019). While, the Global Reporting Initiative is more focussed on guidelines. These guidelines are mainly focused on social, environmental, governance and economic aspects (Global Reporting Initiative, 2015). The studies of Borgert et al. (2019) and Branco & Delgado (2012) measured if the CSR reports applied the OECD, UNGC and CDP guidelines to examine the quality of the CSR reports. The quality of the CSR reports based on these guidelines is measured by creating a dummy variable. If the proposed guidelines can be applied to the CSR report of a firm the dummy variable reflects the value one and zero if not applicable.

3.2.2.1 Transparency Benchmark measure

The Transparency Benchmark performs a study that includes both qualitative as quantitative developments of corporate social reporting. The Transparency Benchmark study is performed among the largest firms in the Netherlands, which are participating on CSR relating issues. The particular study of the Transparency Benchmark is yearly performed and gives the Ministry of Economic Affairs in the Netherlands insight about the disclosure of CSR activities of Dutch firms (Transparency Benchmark, 2019).

The goal of the Transparency Benchmark is to provide an opinion on the content and the quality of external reporting on corporate CSR issues. The accounting information of Dutch firms is reviewed against 40 criteria related to corporate responsibility aspects of the firms. The main criteria are divided into two different subgroups, which are content-related and quality-related criteria. The total possible points earned per report is 200, these points are equally divided between the two subgroups. Particular standards are designed per subgroup and in case of the content-oriented standards there are three main standards, which are (1) Company and Business model, (2) Policy and Results, and (3) Management Approach. In case of the quality-oriented standards, the following standards are applied: (4) Relevance, (5) Clearness, (6) Reliability, (7) Responsiveness, and (8) Coherence (TB, 2017).

Many reasons could be the underlying motive to rate a CSR report zero. The Transparency Benchmark follows this procedure when a CSR reports is not publicly available and/or not available without charge. Besides, when a CSR report is not disclosed on time the Transparency Benchmark is not able to rate the particular report that results into value zero. The Ministry of Economic Affairs also stated that a subsidiary of a larger group of entities is not reporting about their activities in the Netherlands, the CSR report automatically deserves a value zero (Transparency Benchmark, 2016). The detailed overview about the distribution of the points from the Transparency Benchmark is included in the Appendix.

3.2.2.2 GRI guidelines measure

The Global Reporting Initiative is an organization that provides help to business and governments to understand and communicate their impact on critical CSR issues such as climate change, human rights, governance, and social-well being. GRI's mission is as follows: "to empower decisions that create social, environmental and economic benefits for everyone" (Global Reporting Initiative (GRI), 2019a). The GRI pursues this mission with several activities, and one is to collect data regarding CSR reports. This is collected in one large database called the CSR Disclosure Database (SSD). The SSD is an extensive repository of CSR reports that provide help to search and locate the information needed (Global Reporting Initiative (GRI), 2019b).

The SSD also rates the CSR reports on the quality of disclosure, this is done by indicating if the particular quality guidelines are applicable to the CSR reports of firms. The measures used per guideline are elaborated below. This additional measure, based on international guidelines, of the quality of CSR reporting improves the reliability of the effect of the quality of CSR reporting on the firm value in this research. Worldwide, there are several major providers of CSR reporting guidance, for example the Organisation for Economic Co-operation and Development (OECD Guidelines) and the United Nations Global Compact (UNGC) (Global Reporting Initiative, 2019a). The three most important guidelines of CSR quality from these providers, which are also included in the SSD Database, are based on previous research (Muhamad & Salleh, 2019). These guidelines are included in this research and elaborated below. Finally, the three measures are combined to one measure that provides an additional indication of the quality of CSR reports on top of the Transparency Benchmark Score.

1. OECD Guidelines

The OECD Guidelines for Multinational Enterprises are far reaching recommendations for responsible business conduct that 42 adhering governments, representing all regions of the world and accounting for 85 per cent of foreign direct investment, encourage their enterprises to observe wherever they operate (OECD, 2011) The last update of these guidelines were in 2011. The guidelines provide non-binding principles and standards for responsible firms conduct in a global context consistent with applicable laws and internationally recognised standards. The reason that make these particular guidelines important, is that these guidelines are the only multilaterally agreed and comprehensive code of responsible firms conduct that governments have committed to promoting (OECD, 2011).

2. Carbon Disclosure Project (CDP)

The Carbon Disclosure Project (CDP) is an independent organization that is focused on building a sustainable economy by measuring and understanding their environmental impact. The Climate Disclosure Standards Board (CDSB) and the CDP work together to provide a complete, reliable, and verified system for climate disclosure. By the designed framework, "the CDSB provides guidance to communicate that content in mainstream reports, which helps companies to inform their investors and stakeholders, while providing regulators with a comprehensive set of information" (Climate Disclosure Standards Board, 2019). This particular guideline support firms to disclose information regarding CSR. Besides, the CDP stresses the need for transparency about the impact of business towards the environment.

3. United Nations Global Impact (UNGC)

The UNGC argues that corporate CSR means that a firm has to operate in ways that, at a minimum, meet fundamental responsibilities in the areas of human rights, labour, environment and anti-corruption. By incorporating the Global Compact principles into strategies, policies and procedures, and establishing a culture of integrity, companies are not only upholding their basic responsibilities to people and planet, but also setting the stage for long-term success (United Nations Global Compact, 2014). Firms are able to join the UNGC voluntarily, however if the firms are committed to the organizations the principles need to be complied. The firms are responsible to align their strategy with the principles of UNGC.

The above-mentioned guidelines regarding the CSR reporting quality are combined to one measure. Per guideline a dummy variable is created and if a firm's CSR report commits to one of these guidelines the value one is assigned. If a firm's CSR report not meets the guidelines the value zero is assigned. The three guidelines are combined to one value, with a maximum value of three and the lowest value of zero. This measurement is an addition upon the score of the Transparency Benchmark to measure the quality of CSR reports.

Independent variables	Proxy	Measurement
TB score	CSR reporting quality	Score on Transparency Benchmark 1-200
CDP	CSR reporting quality	Dummy variable with a value of 1 if guideline applicable
OECD	CSR reporting quality	Dummy variable with a value of 1 if guideline applicable
UNGC	CSR reporting quality	Dummy variable with a value of 1 if guideline applicable
COMB	CSR reporting quality	Combined measure developed by adding up all scores of the dummy variables

Table 3: Operationalization CSR reporting quality

3.2.3 Independent variable: Analyst recommendations

As mentioned before, the measure the analyst recommendations the I/B/E/S database is used. This database provides data on analyst recommendations and firm forecasts (Ivković & Jegadeesh, 2004). The buy or sell recommendations of analysts act as mediator in the relationship between CSR reporting quality and firm value. The I/B/E/S database provides data about the recommendation of analysts to buy or sell a firm's stock on a scale from 1 to 5. The original data is reversed to the following scale, which is as follows: (1) = strong sell, (2) = sell, (3) = hold, (4) = buy, and (5) = strong buy. This distinction provides more insight about the opinion from the financial analysts regarding the particular firm compared to the number of analyst recommendations.

The mediation effect can be measured by simply performing three separate regression analyses. The basic steps to measure the mediation effect is based on previous research (Baron & Kenny, 1986). First, the effect of CSR reporting quality on firm value is measured. Second, the effect of CSR reporting on the buy or sell recommendation is measured. Ultimately, a regression is performed with CSR reporting quality and the buy or sells recommendation of analysts as independent variable and the firm value as dependent variable.

3.2.4 Control variables

To prevent spurious panel regressions, it is important to include control variables. Previous researchers also corrected this spurious effect by using control variables (Dhaliwal et al., 2011; Hummel & Schlick, 2016; Luo et al., 2015). Control variables are included as independent variables in this regression to prevent that one of these variables drive the result of the independent variables that this research focuses on (Studenmund, 2014). The examined firms differ on: Total Assets, Return on Equity, Leverage and Sector.

The firm size is included, because larger firms have more potential brokerage for analysts' brokerage houses (Bhushan, 1989). The firm size is measured as the total assets of the firm. Analysts have a more prevalent focus on stocks with a greater variability, because the potential earnings are greater (Dhaliwal et al., 2011). To incorporate this effect, the Return on Equity is included as control variable. Previous research assumed that higher leverage of a firm, indicate an unstable capital structure of a firm. This could affect the investment decisions, and thus the firm value (Masulis, 1983). Therefore, the leverage of the particular firms is included as control variable. Additionally, sector specific effects are included. Cho & Patten (2007) showed that the quality of CSR disclosure heavily depends on the sector of the firm. Therefore, the sectors of the firms are included as control variables.

Control variables	**Proxies**	**Measurement**
Sector	Sector	Dummy variable of sector
Assets	Size of firm	Natural logarithm of assets
RoE	Profitability	(Net income / total assets) x 100
Lever	Leverage	Total assets / total equity

Table 4: Operationalization of control variables

3.3 Research model

In order to test the developed hypotheses regarding the mediation effect of the number analyst recommendations, the three steps for mediation is used (Baron & Kenny, 1986). The retrieved data is panel data. The advantage of panel data is that it includes observations on the same variables from the same cross-sectional sample from two or more different time periods (Studenmund, 2014). In case of this research to examine the mediating effect of the buy or sell recommendations in the relationship between CSR reporting quality and firm value, the three steps for mediation are used (Baron & Kenny, 1986).

3.3.1 Mediation model

As mentioned before, the three steps for mediation are used from the study of Baron & Kenny (1986). The first equation includes the effect from the independent variable, Comb, on the dependent variable Firm Value. This effect provides evidence that the independent variable is a significant predictor of the dependent variable. The second equation provides the effect of Comb on MeanRec. The effect of the independent variable on the mediating variable is needed to serve as mediating variable in the relationship between Comb and Firm Value. The third equation measures the mediation effect, meaning that Comb affects MeanRec, which in turn affect Firm Value.

When the three steps are performed, one assumption is made: the error terms of the three equations are not correlated. If the error terms are correlated, this generates biased and inconsistent results (Shaver, 2005). According to previous studies of Luo et al. (2015) and Shaver (2005), 2 Stages Least Squares (2SLS) regression is used to prevent biased results. Meaning, that the estimations of the buy or sell recommendations in equation 2 are included in equation 3. This variable is used as an endogenous variable in equation 3, meaning that the instrumental variable (*MeanRec*) not correlates with ε_3, even if ε_2 and ε_3 are correlated. In the regressions, i stand for the particular value of the variable, j includes the indicator of the particular value and t refers to the examined year. The steps are elaborated below:

Equation 1:

$$Firm\ Value_{\ i,j,t} = \beta_0 + \beta_1 Comb_{i,j,t} + \beta_4 Assets + \beta_5 Sector + \beta_6 Lever + \beta_7 RoE + \varepsilon_1$$

First, the effect of CSR reporting quality on Firm Value is measured, with performing regressions on the three proxies for Firm Value. According to theory, a significant positive relationship is expected between Comb and Firm Value. A direct and significant effect is needed to satisfy the mediation role of analysts in this relationship. However, without this significant effect the following equations can still generate valuable results to the particular firms.

Equation 2:

$$MeanRec_{\ i,j,t} = \beta_0 + \beta_1 Comb_{i,j,t} + \varepsilon_2$$

The second step is to measure the effect of CSR reporting quality on the buy or sell recommendations of analysts. The effect from the independent variable on the mediating variable in this equation is necessary to measure the mediation effect in equation 3. A mediating variable is not able to explain the relationship between a dependent and independent variable, if the independent variable does not affect the mediating variable (Baron & Kenny, 1986).

Equation 3:

$$Firm\ Value_{\ i,j,t} = \beta_0 + \beta_1 Comb_{i,j,t} + \beta_2 MeanRec + \beta_4 Assets + \beta_5 Sector + \beta_6 Lever + \beta_7 RoE + \varepsilon_3$$

The last step measures the mediation effect of the buy or sells recommendations on the relationship between CSR reporting quality and Firm Value. Also this last equation measures the three different proxies for firm value. Comparing the significance and the coefficient of Comb in this equation with equation 1 will show whether a mediation effect holds. If Comb reflects a lower β-coefficient compared to equation 1, then the conclusion can be drawn that a mediation effect of the buy or sell recommendation of analysts is present. The effects of Comb on Firm Value should be shifted towards the mediation variable MeanRec.

4. Results

4.1 Additional analyses

4.1.1 Descriptive analysis

The summary statistics of all variables are presented below in table 5. The mean compared to the median of the variables gives an indication of the skewness of the variables. The mean of the most variables is lower compared to the median, which indicates that most of the variables has relatively few lower values. This is often the case with real-world data (Studenmund, 2014). The standard deviation of the most variables is relatively high; this is due to the fact that the observations of the data are not close the mean of the variables. This means that the observations are widely divided among the range of values. The relatively lower mean and the relatively high standard deviation indicate the presence of extreme values, the residual analyses in chapter 4.1.1 test if these extreme values lead to problems when the regressions are performed. Tests on the normal distribution of the variables are performed to indicate this.

Variable	Observations	Mean	Std. Dev.	Min	Max
EPS	189	1.7482	3.38965	-6.39	24.46
PE	191	22.65075	20.27431	1.08	160.97
MC	191	1.58e+10	3.46e+10	9.76e+07	2.34e+11
Sector	200	7.175	5.407456	1	17
Assets	200	6.94e+07	1.81e+08	229995	1.18e+09
RoE	200	0.105829	0.1570801	-0.5845	0.966
Lever	200	5.54705	5.526627	1.36	27.45
MeanRec	200	2.9012	0.5698378	1.34	4.12
CDP	200	0.375	0.4853378	0	1
OECD	200	0.345	0.4765612	0	1
UNGC	200	0.490	0.5011544	0	1
Comb	200	147.04	44.66915	17	201

Table 5: Summary data

The results show significant differences between the sectors regarding the combined measure of the CSR reporting quality (Comb). The sectors Telecommunication and Consumer Durables stand out with their high Comb-score compared to the other sectors. The sectors Metal Products and Commercial Services disclose the lowest CSR reporting quality. The high quality of CSR reporting in the sector Telecommunication and Consumer Durables can be due to the fact that these firms want to highlight their CSR performance to the investors and thereby increasing the amount of investments in their firms. As the study of Lourenço et al. (2012) showed, investors want to invest in more sustainable-aware firms. The sectors that perform lower than average; the firms can have a low-level of CSR performance and therefore decided to disclose a low-quality CSR reports to hide their actual poor performance. The study of Guidry & Patten (2012) found evidence for this statement.

Sector	Average Comb-score
Telecommunication	194.00
Consumer Durables	193.80
Construction	179.55
Aviation	174.80
Technology Software	159.40
Financial Services	154.01
Energy	150.20
Other	146.30
Food & Beverage	146.28
Chemicals	143.20
Equipment	142.00
Retailers	137.33
Media	131.60
Real Estate	122.06
Commercial Services	94.80
Metal Products	83.30
Total average	**147.04**

Table 6: Average Comb-score per Sector

Table 7 presents the differences between sectors with respect to the average of the buy or sell recommendations of analysts. The sectors that are outperforming the other sectors, based on the average MeanRec, are the Consumer Durables and the Energy sector. The increasing importance of CSR could play a role in these sectors, because these sectors are leading with respect to the loss of natural resources (Energy) and more sustainable products (Consumer Durables). The study of Lund (2007) found that the Energy sector faces the renewable types of energy that have to encourage the sustainable development. This could be the underlying reason that analysts are mainly positive about the Energy sector. The study of Osorio-Arce et al. (2010) found that the Consumer Durables sector is one of the leading sectors with respect to more sustainable consumer products. The sectors that have lower than average MeanRec are the Aviation and Telecommunication sector. Important to point out is that the sector Telecommunication has the highest CSR reporting quality (194) and has the lowest MeanRec (2.27) of all included sectors. The results of table 6 and 7 suggest that there is no significant relationship between a higher (lower) than average CSR reporting quality per sector and a higher (lower) than average analyst recommendations per sector.

Sector	Average Mean Rec
Consumer Durables	3.59
Energy	3.22
Equipment	3.13
Construction	3.13
Chemicals	3.07
Commercial Services	3.02
Food & Beverage	3.01
Metal Products	3.00
Real Estate	2.97
Media	2.83
Other	2.78
Financial Services	2.71
Retailers	2.66
Technology Software	2.57
Aviation	2.52
Telecommunication	2.27
Total average	**2.90**

Table 7: Average MeanRec per Sector

4.1.2 Residual analysis

The residual analysis is important to test the underlying assumptions of the panel data model that is used. First, the multicollinearity between variables is examined; this is done by the Variance Inflation Factor (VIF) test and the Pearson correlation. Multicollinearity can cause difficulties with distinguishing the effect of one variable from the effects of the other (Studenmund, 2014). A VIF below 2 for each of the independent variables indicates that there is no sign of multicollinearity. In case of the Pearson correlation, when the correlation is above 0.5 or below -0.5, then there is a moderate association between two variables. In the situation that the correlation between two variables is above 0.8 or -0.8, then these variables should be omitted from the regression (Studenmund, 2014). The Pearson correlation cannot be used to detect correlation between two dummies (Howitt & Cramer, 2011), therefore the dummies are not included in table 6. The VIF test is displayed in table 5 and the Pearson correlation is presented in table 6, both tests do not show multicollinearity.

Independent Variable	**Variance Inflation Factor (VIF)**
Assets	1.96
Lever	1.92
Comb	1.68
OECD	1.46
Sector	1.39
CDP	1.39
MeanRec	1.33
UNGC	1.26
RoE	1.05
Mean VIF	**1.49**

Table 8: VIF-test

	EPS	PE	MC	Sector	Assets	RoE	Lever	MRec	Comb
EPS	1.000								
PE	-0.122	1.000							
MC	0.312	0.042	1.000						
Sector	0.007	0.287	-0.007	1.000					
Assets	0.162	-0.106	0.681	-0.343	1.000				
RoE	0.163	-0.080	0.187	-0.024	-0.008	1.000			
Lever	-0.178	-0.229	-0.028	-0.502	0.597	-0.061	1.000		
MRec	-0.040	0.134	0.043	0.049	-0.062	-0.014	-0.142	1.000	
Comb	-0.019	0.056	0.298	-0.012	0.344	-0.052	0.188	0.381	1.000

Table 9: Pearson correlation

The additional residual analyses that are conducted were focused on the normality and the homoscedasticity. The normal distribution of the variables cannot be rejected and the variables are viewed as homoscedastic. This means that the assumptions of the research model are not violated in this research, which allows us to conduct the mediation effect regressions.

4.2 Mediation effect regressions

To test if the buy or sell recommendations of analyst act as a mediator in the link between CSR reporting quality (Comb) and firm value, first the effect of CSR reporting quality on firm value is measured and finally the mediation role of analysts is examined. The results are presented in table 10, 11 and 12.

4.2.1 The effect of CSR reporting quality on Firm Value

To test hypothesis 1 the following regressions are performed: Regression A, B and C. This test consists out of three regressions, because firm value is measured with three proxies: Earnings Per Share, Price Earnings ratio and Market Capitalization. These regressions test if the β-coefficient of CSR reporting quality (Comb) is significant on Firm Value. Regression A shows a non-significant negative relationship, while regression B and C show a non-significant positive relationship between the CSR reporting quality and Firm Value. All regressions performed regarding the effect of CSR reporting quality on firm value show non-significant relationships.

Regression	(A)	(B)	(C)
Dependent variable	EPS	PE	MC
Comb	**-0.00604**	**0.0326**	**0.00257**
	(-1.13)	**(0.98)**	**(1.80)**
Assets	0.746***	0.399	0.965***
	(5.11)	(0.44)	(24.56)
Sector	-0.0419	0.821**	0.0124
	(-0.88)	(2.76)	(0.97)
Lever	-0.276***	-0.591	-0.211***
	(-5.06)	(-1.74)	(-14.40)
RoE	2.899*	-10.39	1.864***
	(2.05)	(-1.18)	(4.90)
Constant	-7.844***	9.922	7.038***
	(-3.60)	(0.73)	(12.01)
Observations	200	200	200

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 10: Regression A, B and C

The results show that the relationship between CSR reporting quality and firm value is in all conducted regressions non-significant and shows mixed results, both negative and positive. The study of Hummel & Schlick (2016) found a positive relationship between the CSR reporting quality and firm value, while the study of Bachoo et al. (2013) found a significant

negative relationship between CSR reporting quality and firm value. Thus, the mixed results were also present in previous literature. The results did not prove that CSR reporting quality positively and significantly affects the firm value. Therefore, hypothesis 1 should be rejected.

The underlying reason for the mixed results about whether CSR reporting quality negatively or positively affects firm value can be that investors do not react on each separate category of CSR performance. The study of Jacobs et al. (2010) found that the market positively reacts on the announcement of philanthropic gifts for environmental causes, while the market negatively reacts on voluntary emission reductions. Meaning, that investors value not all categories of CSR improvements positively.

4.2.2 The mediation role of analysts

To test hypothesis 2, if the mediation role of analysts is present, first Regression D is performed. This regression tests if the CSR reporting quality (Comb) has a significant effect on the buy or sell recommendation of analysts (MeanRec). This effect is needed to establish a mediating effect of analysts in the relationship between CSR reporting quality and firm value. The regression is the effect of CSR reporting quality (Comb) on the buy or sells recommendation of analysts (MeanRec), which is the possible mediator. The result of regression D shows that CSR reporting quality does have a significant and positive effect on the buy or sell recommendations of analysts. This means that a higher CSR reporting quality has a positive effect on the buy or sell recommendation of analysts to investors.

Regression	(D) MeanRec
Comb	**0.00487**** **(2.79)**
Constant	2.185*** (16.97)
Observations	200

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 11: Regression D

To test if hypothesis 2 needs to be rejected or cannot be rejected, regression E, F and G are performed. In these regressions it is tested whether the β-coefficient of CSR reporting quality is smaller compared to the regressions in the first step. If a mediation effect of the analysts exists, then the effect of the CSR reporting quality (Comb) on the Firm Value disappears or will weaken in these regressions. This is due to the fact that the mediating

variable (MeanRec) is included. The results of regressions E, F and G show all non-significant relationship between CSR reporting quality (Comb) and Firm Value. Regressions E and F show that the β-coefficient of CSR reporting quality is smaller compared to the regressions in the first step. The β-coefficient of CSR reporting quality is in regression G slightly higher compared to the first step. However, the β-coefficient of CSR reporting quality on firm value is mainly reduced, it cannot be concluded that a mediation role of analysts is present. This is due to the non-significant relationship between CSR reporting quality and firm value.

Regression	(E)	(F)	(G)
Dependent variable	EPS	PE	MC
Comb	**-0.00416**	**0.0128**	**0.00273**
	(-0.70)	**(0.35)**	**(1.71)**
MeanRec	**0.316****	**3.340***	**0.0269****
	(2.77)	**(2.04)**	**(2.81)**
Assets	0.734***	0.531	0.964***
	(4.98)	(0.58)	(24.31)
Sector	-0.0448	0.852**	0.0122
	(-0.93)	(2.86)	(0.94)
Lever	-0.282***	-0.524	-0.212***
	(-5.11)	(-1.53)	(-14.23)
RoE	2.893*	-10.32	1.863***
	(2.04)	(-1.17)	(4.88)
Constant	-6.943**	0.419	7.115***
	(-2.76)	(0.03)	(10.53)
Observations	200	200	200

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 12: Regression E, F and G

Regarding hypothesis 2, the results of regression D indicate that CSR reporting quality has a significant effect on the buy or sell recommendations of analysts. The analysts incorporate the CSR reporting quality in their stock recommendations to investors, which indicates the importance of the quality of CSR reporting. The study of Luo et al. (2015) also found that analysts incorporate CSR in their stock recommendations, the results of Regression D supports this statement. Most important; in the regressions E, F and G, the effect of MeanRec on firm value is significant and when including MeanRec to the relationship, the effect of CSR reporting quality mainly decreased compared to without MeanRec. This change of direction from the β-coefficient of CSR reporting quality suggests that the buy or sell recommendations potentially mediate this relationship. However, due to the non-significant

relationship between CSR reporting quality and firm value the mediation role of analysts cannot be supported by the results. This means that hypothesis 2 needs to be rejected.

The mediation effect of analyst in the relationship between CSR and financial performance is found by the study of Luo et al. (2015). The study focused on the CSR scores related to stock returns, and this study partly extended that statement: the CSR reporting quality significantly affects the buy or sell recommendations of analysts. This means that the CSR reporting quality does play a role in the buy or sell recommendations of analysts. However, due to the non-significant relationship between CSR reporting quality and firm value the mediation role of analysts in this relationship cannot be supported by the results.

Regarding the included control variables; the variables Assets, Leverage and Return on Equity do have a significant effect on Earnings Per Share (EPS) and Market Capitalization (MC), while the fourth control variable: Sector, only had a significant effect on the Price/Earnings (PE) ratio of the firms. The insignificant effects of Sector on EPS and MC can be due to the fact that the sector is not determinative for the EPS and the MC of a firm. A significant control variable means that it is prevented that the independent variables were driven by these control variables when not included in the regressions (Studenmund, 2014).

5. Conclusion and Discussion

5.1 Conclusion

This thesis examined the relationship between CSR reporting quality and firm value by incorporating the mediation effect of analysts. The retrieved data was from the period 2013-2017 and included 40 Dutch firms, which resulted in 200 different observations. The Dutch firms listed on AEX, AMX and ASCX that are actively participating on CSR issues were included. The starting year of 2013 was set, due to the announcement of the Dutch government that CSR activities pay off, which resulted in an increased interest of the Dutch firms regarding CSR (SER, 2013).

Previous studies showed that CSR performance affects firm value; e.g. the study of Gates (2013) found evidence that investors want to invest in more sustainable-aware firms. This means that a higher CSR performance positively affects the firm value. The CSR performance is disclosed in CSR reports, and the underlying motive to disclose CSR reports differs. These different motives lead to a perception issue for investors. Investors are unable to predict the actual CSR performance; meaning investors are unable to make a distinction between low and high-performing firms on CSR issues. The question arises: how can investors make accurate investment decisions based on the CSR reporting if both low and high CSR-performing firms disclose extensive CSR information? This perception problem for investors means that there is information asymmetry between the general investor and the firm regarding the CSR performance of a firm.

According to the study of Hummel & Schlick (2016), the quality of CSR reporting determinative for the CSR performance. This means that the quality of CSR reporting is determinative for the amount of investments. Therefore, the focus of this research is shifted towards the quality of CSR reporting. Moreover, this research adds analyst recommendations to the relationship between CSR reporting quality and firm value to reduce the information asymmetry between the general investor and the firm regarding the CSR performance. The study of Luo et al. (2015) found that analysts incorporate the CSR into their stock recommendations, this reduces the perception problem for investors. Therefore, this research includes the analyst recommendations as mediator in the link between CSR reporting quality and firm value. Thereby, the goal of this research was to add a new dimension to the current literature about the effect of CSR reporting quality on firm value by adding analyst recommendations to this relationship.

The main results showed positive as well as a negative relationship between CSR reporting quality and firm value, most important; all regressions conducted between CSR reporting quality and firm value were non-significant. This means that this research did not found evidence of a significant relationship between CSR reporting quality and firm value. There could be several reasons for a non-significant relationship between CSR reporting quality and firm value.

First, a positive relationship between CSR reporting quality and firm value was expected due to the expectation that the CSR reports generates value relevant information. However, the investors can look at CSR information as a way of window dressing to enhance the financial performance of a firm. In general, the market is focused on the short-term, while the CSR information is focused on the long-term (Hassel et al., 2005). This could be the reason for a non-significant relationship between CSR reporting quality and firm value.

Second, the insignificant relationship could be due to the limited sample size of this research. This research included only listed firms from the Netherlands. The requirement for these listed firms was the actively participation on CSR related issues, which decreased the total sample. The limited sample size caused a low amount of observations, which could be the reason for the non-significant relationship between CSR reporting quality on firm value.

Third, the insignificant relationship between CSR reporting quality and firm value can be due to the fact that investors are constrained and limited in resources to directly understood all the CSR information. This is in line with the study of Luo et al. (2015) that stated that the general investors are not able to process all the CSR information due to the complexity. Therefore, the CSR reporting quality is not captured into the investments decisions of investors, which leads to a non-significant effect of CSR reporting quality on firm value.

The main results regarding that analyst recommendations act as a mediator in the relationship between CSR reporting quality and firm value, showed that the CSR reporting quality has a significant effect on the buy or sell recommendations of analysts. The most conditions for the mediation effect of analysts were also present, because the effect of CSR reporting quality on firm value mainly decreased when analyst recommendations was added to this relationship. And the buy or sell recommendations do have a significant effect on the firm value. However, the significant relationship between CSR reporting quality and firm value to be mediated is not present, which means that the mediation role of analysts cannot be present in this relationship.

The reason for the presence of the significant effect of the CSR reporting quality on the buy or sell recommendations can be that analyst incorporate the CSR reporting quality into their stock recommendations. This supports the study of Luo et al. (2015) that stated that CSR is included in the buy or sell recommendations of analysts regarding a particular firm. Due to the fact that analysts include CSR reporting quality in their stock recommendations to general investors the information asymmetry is reduced between the general investor and the firm regarding the CSR reporting quality.

This thesis brought a new dimension to the following literature: the studies of Hummel & Schlick (2016) and Luo et al. (2015), because evidence was found that CSR reporting quality has a significant effect on the analyst recommendations and that the analyst recommendations have a significant effect on firm value. The main conclusion that can be drawn is that analysts incorporate CSR reporting quality in their stock recommendations to investors. The results stress the importance of the quality of CSR reporting towards firms, because the quality of the CSR reporting plays a significant role in the stock recommendations of analysts to investors. This could be valuable to the managers of the firms, because the analyst recommendations significantly affect the firm value. This indicates that the quality of CSR reporting can serve an indirect instrument when the managers attempt to find value enhancing ways for the particular firm.

5.2 Discussion

A possible limitation of this research is the sample size. Most of the regression that were conducted generated non-significant relationships. The requirements for the Dutch listed firms were international activities and the presence in the GRI database, which assessed the CSR reports. Therefore, only half of the Dutch listed companies could be included in this research. Due to the stated requirements a self-selection bias could be present because only the firms that disclose CSR reports are examined.

Future conducted research on this issue should focus more on a bigger sample size, for example European firms with the disclosure of CSR reports. This increased sample size can lead to more significant results while examining the relationship between CSR reporting quality and firm value. This study included two measures for the quality of CSR reporting, both the Transparency Benchmark rate and the applicability of GRI guidelines to CSR reports. For future research, the amount of guidelines can be extended. This research included

three guidelines for the Dutch listed firms. When future research is conducted, more guidelines can be included to create a more detailed measure of the quality of CSR reports. A more detailed measure can lead to a significant effect of CSR reporting quality on firm value.

Another angle to look at the importance of CSR reporting quality with respect to future conducted research; investors care more about the short-term profits instead of a more sustainable future. As described before, the study of Hassel et al. (2005) found evidence that the market is focused on the short-term, while the CSR information is more focused on the long-term. The non-significant effect of CSR reporting quality on firm value in this research supports this statement. This means that the focus of future research should be shifted towards the criteria of investors to invest in a particular firm, and focus on the fact if CSR reporting quality plays a significant and direct role in the investment decisions of investors. The non-significant effects could be due to the lack of interests of investors towards CSR reporting quality. The question that needs to be addressed: do investors worry about a sustainable future or are they just focused on making (short-term) profit with their investments?

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7. Appendix

Company name	Index	Sector + Code
ABN Amro	AEX	Financial Services (1)
Acomo	ASCX	Food & Beverage (2)
Aegon	AEX	Financial Services (1)
Ahold Delhaize	AEX	Retailers (3)
Air France-KLM	AMX	Aviation (4)
Akzo Nobel	AEX	Chemicals (5)
AMG	AMX	Metal Products (6)
Aperam	AMX	Metal Products (6)
Arcadis	AMX	Real Estate (7)
ASML	AEX	Technology Software (8)
ASR Nederland	AEX	Financial Services (1)
BAM	AMX	Construction (9)
BinckBank	ASCX	Financial Services (1)
Boskalis	AMX	Construction (9)
Corbion	AMX	Food & Beverage (2)
DSM	AEX	Chemicals (5)
Gemalto	AEX	Commercial Services (10)
GrandVision	AMX	Retailers (3)
Heijmans	AMX	Construction (9)
Heineken	AEX	Food & Beverage (2)
ING	AEX	Financial Services (1)
Kendrion	ASCX	Other (16)
KPN	AEX	Telecommunication (11)
NIBC Bank	ASCX	Financial Services (1)
NN Group	AEX	Financial Services (1)
OCI	AMX	Chemicals (5)
Ordina	ASCX	Other (16)
Philips Koninklijke	AEX	Consumer Durables (12)
Randstad NV	AEX	Other (16)

Royal Dutch Shell A	AEX	Energy (13)
SBM Offshore	AMX	Equipment (15)
Sligro	ASCX	Retailers (3)
Unibail-Rodamco	AEX	Real Estate (7)
Unilever	AEX	Food & Beverage (2)
Van Lanschot	ASCX	Financial Services (1)
Volker Wessels	ASCX	Construction (9)
Vopak	AEX	Other (16)
Wereldhave	AMX	Real Estate (7)
Wessanen	ASCX	Food & Beverage (2)
Wolters Kluwer	AEX	Media (14)

Table 13: Included firms from AEX, AMX and ASCX

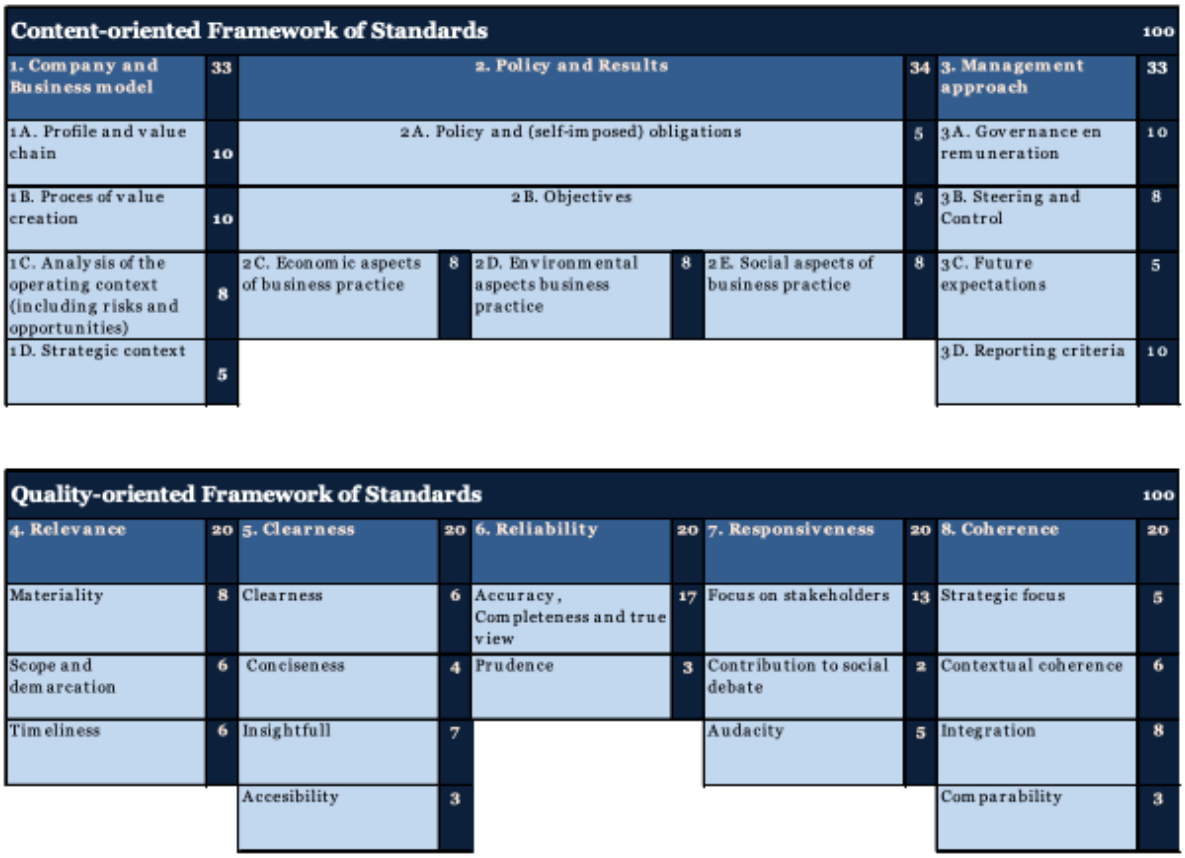

Figure 2: Overview Transparency Benchmark scores