

**How does CSR communication affect New Zealand firm  
performance?**

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**A dissertation submitted to  
Auckland University of Technology  
in partial fulfilment of the requirements for the degree of  
Master of Business (MBus)**

**2022**

**Faculty of Business, Economics and Law**

## Abstract

Corporate social responsibility (CSR) has raised its importance to investors as they have high expectations on firms' social performance. This study looks at the effect of CSR communication on New Zealand firm performance, in terms of firms' stock return and profitability (ROA and Tobin's Q). This study uses 123 New Zealand listed firms as the sample and extracts CSR words (CSRW) from their 34 years (1986 - 2020) of annual reports. The CSRW scores are created by counting the frequency of CSRW (total CSRW and the individual four dimensions of CSR) divided by the total number of words in the annual report. We follow Pencle and Malaescu (2016) and use their CSR dictionary to form our textual analysis and use fixed effect panel regression for data interpretation. The results show that there is no significant relationship between CSR and ROA, Tobin's Q, and stock return. However, there is an increasing trend in the relationships between CSR and ROA, Tobin's Q, and stock return, which is consistent with the fact that investors are more aware of firms' sustainability strategy and corporate social responsibility.

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## Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

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## Acknowledgements

I would like to express my sincere appreciation to my Supervisors, Nhut (Nick) Nguyen Hoang and Sara Ali. They supported me throughout my research journey on this topic that I am interested in and took care of my general well-being during the hard time of national lockdown due to COVID. This dissertation will not be completed without their guidance and advice. I also thank my supervisors for providing the raw CSR word count data.

I would also like to thank my friends and family members, they gave me confidence and support in completing this Master's degree, and made me feel that I am not alone in this journey.

A big shout out to AUT, the university where I spent 6 years of my life in. I am proud that I am a student of AUT and hope that AUT would continue to grow in its reputation and international ranking and help enthusiast students achieve their goals and dreams.

# 1. Introduction

The term corporate social responsibility (CSR) was invented in the middle 20th century for the fact that the stakeholders have high expectations on firms' social value and effect on social well-being (Kreps, 1962). Despite the growing amount of research publications and articles, Fernández-Gago et al. (2020) prove that the CSR context affects business discipline in the business world. It has made firms not only aim in maximising shareholders' value but also the social values (Ji et al., 2019). The CSR topic has also gained attention from the community (Fernández-Gago et al., 2020). It has become increasingly popular for firms to communicate their CSR activities with the public (which includes environmental, social, and governance dimensions) and build their CSR image to improve their CSR perception and increase awareness of their contribution to social well-being (Cormier & Magnan, 2019). This is because firm managers regularly face public pressure from the community and shareholders, and they are required to satisfy all stakeholders of the firms (Shi & Veenstra, 2021). CSR reporting has gradually become an indication of a firm's financial success (Taylor et al., 2018). Jang et al. (2019) state that CSR activities improve firms' performance as they improve firms' brand image. Due to the increase in transparency of information, Mahrinasari (2019) find that it is the communication of CSR affecting the firm since it increases CSR perception, the effect is more than the firm's real influence on the society, and therefore, should be used as a firm's management strategy. The communication of CSR is a decisive factor in the overall management performance of its brand (Taylor et al., 2018). Managers are expected to highlight the message of what they did to engage CSR rather than just considering what they could do to implement CSR strategies, which is a long-term strategy in enhancing the firm's CSR communication (Murashima, 2020). CSR investment is now one of the most important business strategies and it is useful to improve firms' reputations (Mishra, 2017). Servaes and Tamayo (2013) find that CSR awareness can be increased through information disclosure and advertisement, CSR activities will harm the firm or is unrelated to firm performance if they do not properly demonstrate their effort. Miras-Rodríguez et al. (2015) justify that companies use CSR actions to improve their brand image, which may offset some of their bad environmental reputations.

It is important to identify the most suitable source for any research analysis (Unerman, 2000). Documents that deliver company information to their stakeholders such as annual reports and sustainability reports are considered useful documents when retrieving companies' CSR-related information (Unerman, 2000). The vast majority of studies use companies' annual reports as identifiers of their CSR communication. It is reliable and commonly used by shareholders as an indication tool for the company's performance, which may influence their investment decisions.

Most of the research in the area of CSR uses samples from developed countries including the US, Australia, and Canada. This is simply because companies from the developed countries store relatively more information on sustainability scores, as well as information on sustainability strategy, companies' social contribution, and other sustainability-related activities. However, there is a lack of research on New Zealand companies' CSR performance. There is comparatively less literature on the topic of CSR effects on New Zealand firm performances due to the country's smaller size and market. Data companies, such as Refinitiv Datastream, only contain 1/3 of New Zealand's listed companies' sustainability information. This means that there is a huge gap in retrieving New Zealand's company information on CSR. Although New Zealand is considered small in size comparing with other larger countries, however, New Zealand takes great responsibility in the Asia Pacific region, especially its neighbouring island countries, such as Fiji, Tonga, Samoa, and the Cook Islands (Scott, 2021). New Zealand has funded aid and development programmes within these countries in order to lessen the effect of climate change (New Zealand Foreign Affairs & Trade, n.d.). The island countries have been significantly impacted by New Zealand's sustainability projects, indicating that New Zealand has the potential to affect the world (Scott, 2021). New Zealand has also mandated companies to produce climate reports, and this regulation was quickly established by other countries, such as Switzerland and the UK (Caswell, 2021). New Zealand is considered a world-leading country in the area of sustainability, and its relative advancement in the area can be influential to other countries in the world.

This study aims to fill a gap in sustainability research in New Zealand. It analyses the contents of companies' annual reports and examines their CSR disclosure practices to review whether the firms' characteristics are potential determinants of the CSR disclosure practices in New Zealand firms. The study raises the question: How would the communication of CSR in firms' annual reports affect firm performance, in terms of firms' stock return and profitability?

The remainder of this dissertation is structured into five sections: literature review, hypotheses development, data and methodology (which explains how we select the wordlist for CSR and test our hypotheses), results, and conclusion.



## 2. Literature Review

Literature has reported ample evidence on the effects of firms' CSR performances on firms' risk and value. Firms' CSR performances affect firms' risk in the way where firms acted highly responsible to the environment and the society can potentially expose to less risk (Gillan et al., 2019). Chatjuthamard et al. (2020) conclude that CSR is a wise investment for firms as it increases shareholders' values. Hong and Kacperczyk (2009) find that firms with high CSR performance have a wider investor base and are subject to less litigation risk, which would consequently lead to a lower cost of capital. Breuer et al. (2018) estimate that the relationship between CSR performance and a firm's cost of capital depends on the investor protection laws in the country where the firm is located; higher CSR performance reduces the cost of capital in countries with strong investor protection and vice versa. This is because the more regulations the government enforces in the market, the more protection is formed for investors (Lye & Hooy, 2021). Dobbs and van Staden (2016) investigate that CSR reporting increases legitimacy with shareholders and the community, it then creates the image that the firm is socially responsible and cares about sustainability. Pástor et al. (2021) and Pedersen et al. (2021) develop theoretical models that take the investor preferences into account for green stocks and demonstrate that these stocks' cost of capital is expected to be lower than that of non-green stocks.

Ghabri (2022) compares samples from 23 countries and finds that the countries that operate on a common law legal system will provide better protection for their investors compared to the countries that operate on a civil law legal system. Greater investor protection will then lead to better firm performance (Ghabri, 2022). New Zealand is a country that operates on common law, this means that it is considered a country with relatively greater investor protection and less political risk. Chatjuthamard et al. (2020) find that firm's social responsibility level has a negative relationship to its political risk, meaning that socially responsible firms face less political risk.

There is a significant amount of research studying the effect of CSR on firm performance, including stock return, profitability, return on assets (ROA), return on equity (ROE), and Tobin's Q. McGuire et al. (1988) claim to have found a close relationship between CSR and firms' stock market returns; however, conflicts have also been discovered in their findings.

### 2.1 CSR and Firms' Stock Return

Friede et al. (2015) document over 2000 empirical studies and conclude that 90% of the research results show a positive or slight positive relationship between CSR and firm performance. While most of the study samples are from developed countries, Bahadori et al. (2021) test the emerging markets and find a positive relationship between CSR and firm

performance.

Most of the researchers find positive relationships and look at how they contribute to investors' decision-making. Large institutional investors take a great part in global investments, and their investment decisions are gradually leaning towards companies that participate in CSR activities (Sabbaghi & Xu, 2013). This is because their decisions are affected by social norms (Hong & Kacperczyk, 2009). Chiu et al. (2020) find that CSR has positive effects on the stock price because shareholders have increased awareness of CSR and are willing to pay a premium on the shares in companies that engage more in CSR. Jang et al. (2019) state that CSR activities build trust between companies and their stakeholders, which leads to a positive effect on firm performance. Gong et al. (2019) find that CSR activities give investors extra information on the company, therefore, increase stock price efficiency. Flammer (2012) finds a positive relationship between firms' behaviour toward environmental footprints and stock price. Ji et al. (2019) support both positive relationships between CSR activities and stock price, as well as CSR activities and price efficiency, and conclude that the positive effect is beneficial to liquidity traders and consumers.

Other researchers find that CSR only increases firm performance when it is sacrificing a reasonable amount of profit to CSR activities, or under certain conditions. If the firm is not innovative, CSR activities will harm its firm value (Luo & Bhattacharya, 2006). Firms may not benefit from CSR activities if they are already recognised as trustworthy firms (Taylor et al., 2018). Lee (2016) holds the argument that CSR activities will increase firms' costs and raise the conflict of interest between stakeholders. High-value firms are more capable of investing in CSR activities, and thus can increase their stock price, however, CSR activities will have a negative influence on low-value firms (Chen et al., 2017). Miras-Rodríguez et al. (2015) find that the relationship between CSR activities and firm performance is in a bell shape, which means that only the firms that invest highly in CSR, invest in low amount, or does not invest in CSR would have positive effects on its firm performance.

Some studies find a negative relationship between CSR activities and firm performance. The relationship can be affected by the country's culture, such as firms from countries where individualism is significantly valued will tend to have a negative relationship between CSR and firm performance (Shi & Veenstra, 2021). Zhang (2017) finds a negative relationship between US firms' aggregated CSR rating score and stock return. Similarly, Dodd and Liao (2020) find that New Zealand firms that commit more to CSR activities have severe decreases in their stock price during the national lockdown, indicating a decrease in stock return. Since Miras-Rodríguez et al. (2015) find a bell shape relationship between CSR activities and firm performance, firms that invested in CSR but did not invest up to a certain level will harm their

firm performance. In addition, findings are showing that having ethical screenings before investing may negatively impact their portfolio value (Wang et al., 2021). Therefore, despite the international trend of investing ethically, the opportunity cost should also be considered by portfolio managers (Wang et al., 2021).

Some researchers find that sin stocks provide a greater return than ethically responsible stocks. Sin stocks are stocks that involve tobacco, alcohol, gaming, weapons, or anything that may harm people or society in forms of addiction if the goods or services are being used in a careless way (Sabbaghi & Xu, 2013). Hong and Kacperczyk (2009) find that sin stocks outperform non-sin stocks and they are relatively cheaper than non-sin stocks as they have less investor base.

## 2.2 CSR and Firms' Profitability

Return on Assets (ROA) and Return on Equity (ROE) represent accounting-based measures for firms' profitability (Jang et al. 2019). With regards to firm profitability, Jaisinghani and Sekhon (2020) find that the social dimension of CSR has a positive relationship with firms' profitability, whereas the environmental dimension of CSR has a negative relationship with firms' profitability. However, Khojastehpour and Johns (2014) find that the environmental dimension of CSR positively affects profitability. Coleman and Wu (2021) focus on the corporate governance dimension of CSR and find that there is a positive relationship between firms' corporate governance and firms' profitability measured by ROA and ROE. Kurniasari and Warastuti (2015) test a significant positive relationship between CSR and profitability. The relationship between the different dimensions of CSR and firms' profitability does not reach a consensus possibly because the results may be influenced by the industry, country, and other determinant factors.

Miller et al. (2020) prove that CSR activities form companies' CSR reputations, and influence investors' decisions, therefore, have effects on firm performances, such as ROA. They test amongst the banking sector and conclude that an improvement in CSR reputation increases a firm's ROA by 4.04%; opposingly however, damage to CSR reputation decreases a firm's ROA by 7.8% (Miller et al. 2020). Bhattacharyya and Rahman (2019) document a positive relationship between firms' CSR expenditure with ROA or with cash flow from operations, meaning that building up a CSR reputation would improve a firm's performance. Velte (2017) finds that firms' CSR performance positively impacts firm performance measured by ROA. Hategan and Curea-Pitorac (2017) find that CSR activities of corporate giving have a positive relationship with firm performance measured by ROE. Cornett et al. (2016) also test a positive relationship between firms' CSR activities and ROE.

Other researchers find no relationship between firms' CSR disclosure and profitability.

Herdjiono and Ture (2021) find that firms' CSR disclosure does not affect firm value measured by profitability. Belu and Manescu (2013) find a neutral relationship between firms' CSR strategy and ROA. Buallay et al. (2021) focus on the banking sector and find that CSR disclosure weakens firm performance measured by ROA and ROE.

### 2.3 CSR and Firms' Tobin's Q

Taylor et al. (2018) describe Tobin's Q as often used to capture firm performance, it measures the market values and compares them to the intrinsic values of the firm. It is a forward-looking measure that estimates firms' future profits, and therefore, is considered a profitability ratio (Belu & Manescu, 2013). Murashima (2020) suggests that CSR activities have a long-term impact on firms' value measured by Tobin's Q. This is because the communication of CSR attracts government support, capital funds, and socially responsible long-term investors (Murashima, 2020). Park (2017) supports this finding and proves that firms' CSR activities create positive long-term impacts on firm performance measured by Tobin's Q. This is because firms' CSR activities have positive effects on firm reputations (Park, 2017). Aboud and Diab (2018) find that firms with higher CSR ranking have higher firm value measured by Tobin's Q. Innovative firms have a significantly higher Tobin's Q when they perform CSR activities, compared to the less innovative firms (Mishra, 2017). Hategan and Curea-Pitorac (2017) find that CSR activities of corporate giving have a positive relationship with firms' value measured by Tobin's Q. Taylor et al. (2018) find a positive relationship between firms' CSR disclosure and Tobin's Q. Ghabri (2022) also finds a positive relationship between firms' CSR activities and Tobin's Q.

Hannah et al. (2021) conclude that 59% of the studies demonstrate positive relationships between firms' CSR and Tobin's Q, the remainder of studies find a neutral or negative relationship between firms' CSR and Tobin's Q. Velte (2017) finds that firms' CSR performance has no impact on firm performance measured by Tobin's Q. Belu and Manescu (2013) find a neutral relationship between firms' CSR measure and Tobin's Q. Guo et al. (2020) find a negative relationship between firms' CSR activities and Tobin's Q. Buallay et al. (2021) find a negative relationship between banks' CSR disclosure and performance measured by Tobin's Q. Coleman and Wu (2021) find a negative relationship between firms' corporate governance dimension of CSR and Tobin's Q.

### 2.4 CSR effects in New Zealand

New Zealand, a developed country that prioritises sustainability goals upfront, ratified the Paris Agreement early for the benefit of both the global and local communities (Thomas, 2016). New Zealand's leadership position at the decision-making table of the Paris Agreement has confirmed its commitment to climate change and sustainability (Beehive, 2016). This led to

New Zealand becoming the first country to establish regulations on firms' mandatory climate change reporting, which require large firms to report their governance, strategy, risk management, metrics and targets in accordance with government strategies (Ministry for the environment, 2021). This mandatory reporting will accelerate the transition of New Zealand toward a zero-carbon economy and accommodate the government's goal of achieving net-zero carbon by 2050 (Ministry for the environment, 2021). Research has shown that New Zealand shareholders are positive about seeing government actions on corporate disclosure of its environmental footprint, this is due to the community and shareholders' supervision being the main reason for New Zealand companies to report their CSR actions (de Villiers & van Staden, 2012; Dobbs & van Staden, 2016). The CSR disclosure information will be beneficial for socially responsible investors (Baier et al., 2020). However, Nilipour et al. (2020) examined the readability of sustainability reporting of New Zealand companies and the results show that the sustainable reporting may mislead stakeholders regarding the level of sustainable status of the company.

Most of the researchers use Morgan Stanley Capital International, KLD Research Analytics Inc. (MSCI KLD), and Environmental, Social, and Governance (ESG) for company ratings (Pencle & Malaescu, 2016). On top of that, multiple disciplines of CSR have researched the effect on firm perceptions and performances, such as stock price and firm's profitability. Thaker (2019) uses keyword count and other combined methods as reliable measures for sustainability communication. However, the limited CSR information for New Zealand firms in these databases will restrict the accuracy of the findings. Alternatively, limited studies on the CSR effects on New Zealand firms also drive the interest of this research.

### 3. Hypotheses Development

New Zealand shareholders are known to support the idea of reporting firms' environmental impacts years before the government announcement of mandatory climate reporting (de Villiers & van Staden, 2012). This means that New Zealand is a country whose stakeholders genuinely care about sustainability. Therefore, the research of the New Zealand market in the field can be considered essential. Sustainability information is hard to quantify as CSR is not clearly defined (Baier et al., 2020). Baier et al. (2020) state that textual analysis can be a useful method for measuring firms' CSR reporting, and this may be achieved by creating a CSR dictionary. However, there is a lack of international research stepping into textual analyses of firm documents (Lang & Stice-Lawrence, 2015); therefore, this research will provide an accordance response aiming to analyse New Zealand firms' documents. Pencle and Malaescu (2016) suggest that we use company information that is not specifically designed for sustainability or CSR information. Nilipour et al. (2020) also suggest that sustainability reports may contain misleading information where shareholders may percept an incorrect sustainable status of the company. Annual reports have a high level of credibility among company documents as they are important information for shareholders to use in evaluating firm performance (Unerman, 2000). Unerman (2000) suggests that annual reports are useful sources to retrieve companies' CSR information. This indicates the importance of CSR communication and disclosure, and therefore, serves as a reason as to why this research should look at firms' annual reports to examine how they have been communicating CSR disclosure through their public-released information.

In this study, we first examine the company's annual reports and apply content analysis to get the CSR word count for all four dimensions as per Pencle and Malaescu's (2016) methodology in their CSR dictionary. Secondly, we use linear regression models to investigate the relationships between CSR and each of the influencing factors, including profitability and return. Lastly, we analyse how the communication of different dimensions of CSR affects firms' financial performance, such as ROA, Tobin's Q, and stock return. The dimensions of CSR include employee, environment, human rights, and social and community.

There are mixed findings of positive and negative relationships in the literature, however, this study leans towards a positive relationship based on the balance in the empirical results reported in the literature. Friede et al. (2015) conclude that over 90% of published research tests a positive or slight positive relationship between CSR information and firm performance. Therefore, in this study, we adopt the relationship expectations and analyse firms' financial performance in explanatory factors, such as profitability (ROA and Tobin's Q) and stock return, which will be discussed in detail:

### Profitability (ROA)

Oware and Mallikarjunappa (2020) have proven that mandatory CSR reporting increases firms' CSR expenditures which will significantly increase firm performance measured by ROA. Lin et al. (2021) address that CSR has been largely adopted as a business financial strategy as it significantly increases firms' financial performance, especially on ROA. Firm size and debt ratios are moderated where there is a negative moderation effect on CSR to ROA (Lin et al. 2021). Miller et al. (2020) also find a positive relationship between CSR reputation and ROA. Based on these studies, we form the hypothesis:

*H1: There is a significant relationship between ROA and CSR disclosure.*

### Profitability (Tobin's Q)

Tobin's Q measures the market values and compares them to the intrinsic values of the firm Taylor et al. (2018). It can be used as a proxy for firms' profitability as it shows the investors' expectations of firm growth. Research finds that CSR disclosure increases the firm value when measured by Tobin's Q (Taylor et al., 2018). Ghabri (2022) also finds that CSR activities have a positive relationship with firms' performance in terms of Tobin's Q. The communication of CSR attracts socially responsible investors and increases firms' Tobin's Q in a long-term perspective (Murashima, 2020). Based on the research, the following hypothesis is formed:

*H2: There is a significant relationship between Tobin's Q and CSR disclosure.*

### Stock Returns

The relationship between CSR activities and stock returns has not reached a consensus. However, de Villiers and van Staden (2012) prove that New Zealand investors care about the social and environmental performance of the companies they invest in. Chiu et al. (2020) find a positive relationship between CSR and stock price as CSR activities will attract more socially responsible investors. We expect that the attraction of more socially responsible investors shall end up with lower investor risk. The extra information on CSR disclosure provides investors additional information which will lead to higher stock price efficiency (Gong et al., 2019). Based on the above research information, we hypothesise that:

*H3: There is a significant relationship between Stock Returns and CSR disclosure.*

## 4. Data and Methodology

Our sample initially consists of 186 New Zealand listed firms. We remove ETFs and firms whose financial data is unavailable in Refinitiv Datastream database, and this leaves us a total of 123 firms in our final sample. We use this sample of a total of 123 listed companies on the New Zealand Stock Exchange over the period between 1986 and 2020 and download all the available annual reports from the NZX Company Research Database. Appendix A displays the name of the companies included in our study.

To test the reliability of our findings, we download the ESG scores and financial data from Refinitiv Datastream Database to investigate whether our measure for CSR is fair compared with their third-party evaluation scores. Our scaled CSR score and Datastream ESG score should form similar relationships with firm performance if our score is a fair measure of companies' input and disclosure of CSR. This is the final step to confirming the findings.

We follow Pencle and Malaescu (2016) and measure the operationalisation of CSR through the CSR Words (CSRW) and refer to their sample of wordlists for the four CSR dimensions of employee (318 terms), environment (464 terms), human rights (309 terms), and social and community (361 terms). The use of wordlists indicates the firm's attitude toward CSR as the text written by the reporting managers discusses the strategies of business, internal and external events involvement, labour issues within the firm, environmental impacts, firm risks, and other firm-related events. (Myšková & Hájek, 2019). Appendix B, C, D, and E display the wordlists for each dimension of CSR.

Pencle and Malaescu (2016) adopted the following definition for the four dimensions:

Employee: firms' status and involvement in their internal stakeholders, such as their employees and other human resources.

Environment: firms' status and involvement in the environment and natural resources, such as energy, water, waste, as well as reducing carbon footprint and the risk of climate change.

Human Rights: firms' status and involvement on all stakeholders and human resources to ensure all personnel, including minorities, are included and hold the same rights.

Social and Community: firms' status and involvement within the society and the community that may affect or have an impact on social issues and development.

We use Python codes to run the content analysis through each of the documents to evaluate the firms' CSR performance and find the frequency of CSRW used in the firms' annual reports. The benefit of this method is that we can analyse and compare hundreds of reports simultaneously (Pencle & Malaescu, 2016). The counting of the frequency of CSRW quantifies



the CSR information. CSRW reflects the sustainable contribution of the firm, they represent the communication of CSR. Each dimension of CSRW count (employee, environment, human rights, and social and community) will then be scaled by the total number of words in each annual report to get the proportion in percentage, which represents the weight of the CSR dimension. These will be measured as CSRW scores. The scores represent the level of CSR disclosure, which may affect the CSR perception of the firm. Every year between 1986 and 2020, we count the words for each of the four dimensions and the total number of words in each document to obtain the scaled score. The 35 years of CSRW scores will also provide the trend in the firms' level of CSR communication, which is expected to increase throughout the years due to the rise in investors' interest in sustainability issues. The CSRW scores will be used as the measure of CSR communication.

Researchers normally use the available scores evaluated by third-party companies, such as Refinitiv Datastream has its sustainability scores for ESG combined (ESGC Score), environment score (EP), social score (SP), and governance score (GP). We test whether our CSRW scores are fair measures by comparing our CSRW scores and Datastream scores and see if they create similar relationships on the effect of firm performance.

We form the models for the hypotheses:

$$\text{Performance}_{i,t} = \alpha + \beta_1 \text{CSRW}_{i,t} + \beta_2 \text{MTBV}_{i,t} + \beta_3 \text{SIZE}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{D2A}_{i,t} + \beta_6 \text{CHS}_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where Performance is the firm performance measured by accounting-based performance with proxies of ROA and Tobin's Q and market-based performance with a proxy of stock return. ROA is the return on assets of firm *i* in year *t* as a proxy for the firm's operating performance in profitability. Tobin's Q is the ratio of the market value of a company and its assets' replacement cost of firm *i* in year *t* as a proxy for the firm's value in profitability, where MTBV is used as a proxy for Tobin's Q. Stock return is the return in the market stock price of firm *i* in year *t* as a proxy for the firm's performance in the market return. CSRW is the CSR score that we extract and calculate from the firm's annual reports. MTBV is the market to book value, it is the overall value of the firm. SIZE is the size of the firm, measured by the logarithm of the market value of equity. ROA is the return on assets, it is a proxy for firm profitability. D2A is the debt to asset, it is the proxy for the leverage of the firm. CHS is the closely held shares, it is the proxy for the ownership structure of the firm.

As for comparison, we replace our CSRW scores (CSR communication) with the ESG scores from Refinitiv Datastream (Datastream ESG score). The adjusted regression model is presented as below:

$$\text{Performance}_{i,t} = \alpha + \beta_1 \text{ESG}_{i,t} + \beta_2 \text{MTBV}_{i,t} + \beta_3 \text{SIZE}_{i,t} + \beta_4 \text{ROA}_{i,t} + \beta_5 \text{D2A}_{i,t} + \beta_6 \text{CHS}_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where ESG represents the Datastream ESG score, graded by the independent third-party evaluating company, Refinitiv Datastream. All other variables remain the same and are defined as in eq. (1).

The models test the effects between CSR communication and firms' performance, including firms' ROA, Tobin's Q, and stock return. Miller et al. (2020) test a positive relationship between CSR and ROA, Liang and Renneboog (2017) test a positive relationship between CSR and Tobin's Q and ROA, Albuquerque et al. (2021) test a positive relationship between CSR and Tobin's Q. Ji et al. (2019) test a positive relationship with CSR and stock price; therefore, we expect positive relationships between CSR communication and firms' performance in this study.

Our research captures the firm's CSR through its annual report disclosure of CSRW, which represents the CSR communication by the firm. We have yet to discover the implications of CSR reporting on firm performance.

Random and fixed effects are common study methods that are used in the literature, however, in terms of regression models, researchers almost always use fixed effect regression (Newsom, 2006). In this study, we use fixed effects to control for time-invariant factors and use fixed effect regressions because they express one step ahead and we can see how other regressions will help us penetrate forward data. In order to apply fixed effects regression to the sample, panel data is used.

## 5. Results

In this section, we test our hypotheses by running the following tables. The first group is the CSR communication which we measure the total four dimensions CSR by counting the frequency of CSRW divided by the total number of words in the annual report. The four dimensions CSR are: employee dimension of CSR (EMP), environment dimension of CSR (ENV), human rights dimension of CSR (HRT), and social and community dimension of CSR (SCM). The second group is the financial variables, in which we use the market to book value (MTBV), return on assets (ROA), return (RET), size (SIZE), debt to assets (D2A), and closely held shares (CHS) to measure Tobin's Q, profitability, stock return, company size, leverage ratio, and liquidity ratio respectively. These variables represent the firm performance. To test the robustness of the results, we use the third group, Refinitiv Datastream ESG score, as a comparison and see whether the CSRW score and Datastream ESG score can be used interchangeably and create similar relationships with firm performance.

The remaining subsections include an interpretation of the summary statistics, the determinants of CSR communication, CSR communication and firm financial performance, and the determinants of Datastream ESG scores.

## 5.1 Summary statistics

Table 1 shows that there are 2047 annual reports in the sample which we extract the CSR communication measures from. The TTL mean of 5.29 represents that on average, there is 5.29% of CSRW in an annual report. It does not equal the total of all four dimensions of CSRW because a CSRW can be classified into more than one component. HRT has the lowest mean, indicating that HRT words take up the smallest proportion of 1.97% of total words, and EMP words take up the greatest proportion of 3.26% of total words among the four dimensions of CSR. The standard deviation (Std. Dev.) shows the distribution of the variables, in which the four dimensions of CSRW are normally distributed and TTL is left-skewed.

Firm characteristics have an inconsistent amount of data between 1794 and 2327. The mean of MTBV indicates that on average, a firm's market value will be 2.54 times the worth of its book value. The mean of ROA indicates that on average, a firm has a 2.15% profitability concerning its total assets. The mean of RET indicates that on average, a firm generates a 12.84% stock return. The mean of SIZE indicates that on average, a firm has a market value of equity of NZ\$281.5m. This is calculated as we take the exponential of the natural log value of 5.64. The mean of D2A indicates that on average, a firm has 23.03% of debts compared to its assets owned by shareholders. The mean of CHS indicates that on average, 37.20% of the company shares are closely held by internal or a small number of investors.

Only 521 data information is available for Refinitiv Datastream ESG Scores. This is because that Refinitiv Datastream ESG information is only available after 2015. Some firms may not have ESG data available in their database if they have not incorporated CSR. The mean of GVP indicates that on average, firms have a governance pillar score of 51.38 out of 100. The mean of ENP indicates that on average, firms have an environmental pillar score of 29.34 out of 100. The mean of SOP indicates that on average, firms have a social pillar score of 40.31 out of 100. The firms have an average ESG Combined score (ESGC) of 38.68. The results show that New Zealand firms have a greater performance in corporate governance and are least aware of the environmental impacts.

**Table 1**

*Summary Statistics on the CSR Communication, Financial Variables and Refinitiv Datastream ESG Scores for 1986-2020*

	N	Mean	Median	Std. Dev.	P <sub>5</sub>	P <sub>25</sub>	P <sub>75</sub>	P <sub>95</sub>
<b>CSR communication</b>								
TTL	2047	5.29	5.64	2.00	0.98	4.21	6.72	7.92
EMP	2047	3.26	3.28	1.33	0.56	2.63	4.00	5.54
ENV	2047	2.28	2.32	0.84	0.50	1.89	2.77	3.61
HRT	2047	1.97	2.05	0.75	0.36	1.65	2.41	3.00
SCM	2047	2.15	2.18	0.82	0.37	1.73	2.62	3.40
<b>Firm &amp; Industry Characteristics</b>								
MTBV	1796	2.54	1.44	3.01	0.51	0.92	2.88	8.39
ROA	1794	8.11	6.72	5.94	1.28	3.97	10.66	20.35
RET	2327	12.84	8.40	41.80	-46.67	-10.35	28.89	83.71
SIZE	2279	5.64	5.44	2.51	1.712	3.94	7.1	10.17
D2A	2266	23.03	20.90	20.39	0.00	5.89	33.76	62.26
CHS	1831	37.20	35.38	30.01	0.12	7.07	61.62	86.81
<b>Refinitiv Datastream ESG Scores</b>								
GVP	521	51.38	53.13	25.05	10.33	31.18	71.36	90.07
ENP	521	29.34	19.17	27.81	0.00	3.92	50.59	82.49
SOP	521	40.31	36.56	21.62	11.75	23.62	51.11	86.72
ESGC	521	38.68	35.76	18.80	13.47	24.21	49.61	74.56

Notes: This table reports summary statistics for the CSR communication measures and financial variables used to analyse the sample New Zealand companies. The CSR communication measures obtained by examining the sample companies' annual reports for each of the four dimensions of the Pencle and Malaescu (2016) CSR dictionary, that includes TTL (CSRW count on sum of all four dimensions), EMP (CSRW count on Employee dimension), ENV (CSRW count on Environment dimension), HRT (CSRW count on Human Rights dimension), and SCM (CSRW count on Social and Community dimension). Each CSRW Score is scaled by the total number of words in each annual report; Financial variables includes: MTBV (Market to Book Value), ROA (Return on Assets, Profitability ratio), RET (Stock Returns), SIZE (Logarithm of Market Value of Equity), D2A (Debt to Assets, Leverage ratio), and CHS (Closely Held Shares); Refinitiv Datastream ESG Scores includes: GVP (Government Pillar Score), ENP (Environment Pillar Score), SOP (Social Pillar Score), and ESGC (ESG Combined Score). All variables are winsorised at the 1% and 99% level for each year. The sample includes 123 distinct firms from 1986-2020. The summary statistics of each variable include the number of observations, Mean, Median, Standard Deviation, Minimum, Maximum, and the 5<sup>th</sup>, 25<sup>th</sup>, 75<sup>th</sup> and 95<sup>th</sup> Percentile.

Table 2 indicates the correlations between CSR communication, firm characteristics, and Datastream ESG scores. The CSR communication measures are significantly and highly correlated with each other, indicating that firms that have reported one dimension of CSRW will likely have reported other dimensions of CSRW in their annual reports. ROA is reported to have significant positive correlations with all CSR dimensions except for the environment. RET is negatively correlated with all dimensions of CSR. SIZE is positively and significantly correlated with all dimensions of CSR. D2A is negatively and significantly correlated with all dimensions of CSR, except for just a negative correlation with the employee dimension of CSR. CHS is negatively and significantly correlated with all dimensions of CSR. The Refinitiv Datastream ESG scores are significantly and highly correlated with each other, indicating that firms that have the reported one ESG pillar will likely have reported other ESG pillars.

There is a moderate correlation between SIZE and TTL ( $r = 0.363$ ), and a moderate correlation between SIZE and ESGC ( $r = 0.527$ ), indicating that the size of the firm determines the amount of CSR strategy it is implementing. The weak positive correlation ( $r = 0.106$ ) between TTL and ESGC supports the concept of using textual analysis scores as interchangeable measures of third-party evaluations of firms' ESG performance. There are weak positive correlations between the CSR communication measures and the Refinitiv Datastream ESG scores except for CSRW on the Environment dimension.

Weak positive correlations are detected between TTL and MTBV, ROA, and RET. On the other hand, weak negative correlations are detected between TTL and D2A, and between TTL and CHS. A weak positive correlation is detected between ESGC and ROA, and a weak negative relationship is detected between ESGC and MTBV, RET, D2A, and CHS.

**Table 2**

*Correlation Coefficients among CSR Communication, Financial Variables and Refinitiv Datastream ESG Scores for 1986-2020*

Variables	TTL	EMP	ENV	HRT	SCM	MTBV	ROA	RET	SIZE	D2A	CHS	GVP	ENP	SOP	ESGC
<b>CSR Communication</b>															
TTL	1														
EMP	0.540***	1													
ENV	0.841***	0.611***	1												
HRT	0.861***	0.732***	0.737***	1											
SCM	0.788***	0.754***	0.712***	0.783***	1										
<b>Financial Variables</b>															
MTBV	0.026	0.032	-0.037	0.092***	0.056**	1									
ROA	-0.005	0.010	-0.001	0.053**	-0.021	0.383***	1								
RET	0.015	-0.036	-0.005	-0.003	-0.004	0.051**	0.136***	1							
SIZE	0.363***	0.222***	0.163***	0.354***	0.373***	0.073***	0.295***	0.055***	1						
D2A	-0.088***	-0.017	-0.096***	-0.077***	-0.074***	-0.055**	-0.059***	-0.059***	-0.131***	1					
CHS	-0.280***	-0.110***	-0.131***	-0.210***	-0.207***	-0.011	-0.093***	0.036	-0.428***	0.129***	1				
<b>Refinitiv Datastream ESG Scores</b>															
GVP	0.155***	0.146***	-0.076	0.300***	0.183***	-0.105**	0.042	-0.086*	0.428***	0.090**	-0.123***	1			
ENP	0.021	0.023	-0.046	0.076*	0.188***	-0.083*	0.04	-0.049	0.583***	-0.022	-0.100**	0.566***	1		
SOP	0.049	0.074	-0.095**	0.184***	0.134***	0.107**	-0.001	-0.05	0.564***	-0.078*	-0.192***	0.501***	0.730***	1	
ESGC	0.106**	0.117**	-0.081*	0.240***	0.199***	-0.015	0.037	-0.057	0.527***	-0.045	-0.130***	0.771***	0.821***	0.819***	1

Note: This table reports the Pearson correlation coefficients among the CSR communication measures and financial variables used to analyse the sample New Zealand companies. The CSR communication measures obtained by examining the sample company's annual reports for each of the four dimensions of the Pencle and Malaescu (2016) CSR dictionary, that includes TTL (CSRW count on sum of all four dimensions), EMP (CSRW count on Employee dimension), ENV (CSRW count on Environment dimension), HRT (CSRW count on Human Rights dimension), and SCM (CSRW count on Social and Community dimension). Each CSRW Score is scaled by the total number of words in each annual report; Financial variables includes: MTBV (Market to Book Value), ROA (Return on Assets, Profitability ratio), RET (Stock Returns), SIZE (Logarithm of Market Value of Equity), D2A (Debt to Assets, Leverage ratio), and CHS (Closely Held Shares); Refinitiv Datastream ESG Scores includes: GVP (Government Pillar Score), ENP (Environment Pillar Score), SOP (Social Pillar Score), and ESGC (ESG Combined Score). All variables are winsorised at the 1% and 99% level for each year. The sample includes 123 distinct firms in 1986-2020. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level.

## 5.2 Determinants of CSR Communication

The determinants of CSR communication are Employee (EMP), Environment (ENV), Human Rights (HRT), and Social and Community (SCM).

Table 3 shows the impact of CSR Communication on firm characteristics adjusted for industry and year effect. The significant positive coefficient on SIZE means that firm size has a strong and statistically significant effect on CSRW, indicating that larger firms tend to report more on their CSR activities. MBTV is negative and significant for ENV and HRT, meaning that firms that report more on the environment or human rights dimension of CSR tend to have a less market value than their book value. ROA is positive and significant for HRT, meaning that firms that report more on the human rights dimension of CSR tend to have a greater return on assets. D2A is positive and significant for EMP and HRT, meaning that firms that report more on the employee or human rights dimension of CSR tend to have a larger debt to asset ratio. CHS is positive and significant for EMP and negative and significant for HRT, meaning that firms that report more on the employee dimension of CSR will have more shares held by internal or close investors, firms that report more on the human rights dimension of CSR will have fewer shares held by internal or close investors.

The trend of the regression results in Panel B, Panel C, and Panel D indicates that there is more significance in the recent year relationships between CSRW scores and firm characteristics, which may be due to the rise in awareness of sustainability.



**Table 3***Determinants of CSR Communication*

	Panel A: Full Sample 1986-2020					Panel B: Sub Sample 1986-2000				
	TTL	EMP	ENV	HRT	SCM	TTL	EMP	ENV	HRT	SCM
MTBV	-0.040 (0.031)	0.008 (0.022)	-0.026** (0.012)	-0.023** (0.010)	0.003 (0.011)	0.273 (0.220)	0.113 (0.137)	0.016 (0.102)	0.107 (0.082)	0.096 (0.090)
SIZE	0.193*** (0.033)	0.078*** (0.021)	0.029** (0.014)	0.077*** (0.011)	0.135*** (0.015)	0.368* (0.220)	0.316* (0.159)	0.287*** (0.101)	0.068 (0.089)	0.177* (0.099)
ROA	-0.002 (0.011)	0.011 (0.007)	0.002 (0.004)	0.010*** (0.004)	-0.002 (0.004)	-0.074 (0.055)	-0.066* (0.034)	-0.025 (0.025)	-0.032 (0.021)	-0.037 (0.024)
D2A	-0.000 (0.003)	0.006*** (0.002)	-0.000 (0.001)	0.002* (0.001)	0.000 (0.001)	-0.017 (0.011)	-0.006 (0.006)	-0.002 (0.005)	-0.008** (0.004)	-0.011** (0.004)
CHS	-0.008*** (0.002)	0.005*** (0.001)	-0.001 (0.001)	-0.001** (0.001)	-0.000 (0.001)	-0.009 (0.009)	0.000 (0.005)	-0.004 (0.004)	-0.003 (0.003)	-0.002 (0.003)
N	1080	1080	1080	1080	1080	117	117	117	117	117
Adj.R <sup>2</sup>	0.409	0.362	0.413	0.474	0.317	0.233	0.280	0.248	0.178	0.245

	Panel C: Sub Sample 2001-2010					Panel D: Sub Sample 2011-2020				
	TTL	EMP	ENV	HRT	SCM	TTL	EMP	ENV	HRT	SCM
MTBV	0.024 (0.092)	-0.017 (0.060)	-0.056 (0.039)	0.003 (0.037)	0.034 (0.040)	-0.091*** (0.027)	-0.004 (0.024)	-0.038*** (0.011)	-0.037*** (0.008)	-0.013 (0.010)
SIZE	0.395*** (0.094)	0.119* (0.067)	0.142*** (0.041)	0.118*** (0.034)	0.176*** (0.043)	0.097*** (0.035)	0.031 (0.023)	-0.027* (0.014)	0.047*** (0.011)	0.112*** (0.016)
ROA	-0.025 (0.025)	0.035* (0.020)	0.012 (0.011)	0.014 (0.011)	0.001 (0.011)	-0.006 (0.011)	0.011 (0.008)	-0.001 (0.004)	0.005* (0.003)	-0.007 (0.004)
D2A	0.003 (0.006)	0.014*** (0.004)	0.005* (0.002)	0.005** (0.002)	0.002 (0.002)	-0.006* (0.003)	0.003 (0.003)	-0.004*** (0.001)	-0.001 (0.001)	-0.001 (0.002)
CHS	-0.011*** (0.004)	0.011*** (0.003)	0.001 (0.001)	0.000 (0.001)	0.000 (0.002)	-0.010*** (0.002)	0.003* (0.002)	-0.003*** (0.001)	-0.002*** (0.001)	-0.000 (0.001)
N	349	349	349	349	349	614	614	614	614	614
Adj.R <sup>2</sup>	0.162	0.235	0.180	0.273	0.155	0.351	0.202	0.383	0.450	0.294

Note: This table reports estimates from regressing the CSR communication measures on the various financial variables to examine determinants of CSRW count. Panel A displays the results for the full sample period from 1986 through 2020, while Panel B, Panel C, and Panel D displays the subsample results for the period of 1986 - 2000, 2001 - 2010, and 2011 - 2020 respectively. All the results report from the following model:  $CSRW_{i,t} = \alpha + \beta_1 MTBV_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 D2A_{i,t} + \beta_5 CHS_{i,t} + \varepsilon_{i,t}$ ; The dependent variable  $CSRW_{i,t}$  indicates the CSR communication measures  $TTL_{i,t}$ ,  $EMP_{i,t}$ ,  $ENV_{i,t}$ ,  $HRT_{i,t}$ ,  $SCM_{i,t}$ ; Where TTL = CSRW count on sum of all four dimensions; EMP = CSRW count on Employee dimension, ENV = CSRW count on Environment dimension, HRT = CSRW count on Human Rights dimension), SCM = CSRW count on Social and Community dimension. The independent variables include ROA = Return on Assets, MTBV = Market to Book Value, SIZE = Logarithm of Market Value of Equity, D2A = Debt to Assets, CHS = Closely Held Shares. Each CSRW Score is scaled by the total number of words in each annual report. All variables are winsorised at the 1% and 99% level for each year and the panel regression results are adjusted for industry and year effect. Figures in parenthesis represents the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level

### 5.3 CSR Communication and Firm Financial Performance

To test *H1*, we regress the ROA effects on CSRW adjusted with industry and year effect and the results are shown in Table 4. In the full year sample of Panel A data, the results show that EMP, ENV, and HRT dimensions of CSRW have positive coefficients with ROA but only the HRT dimension of CSRW has a significant coefficient and it is significant at a 1% level. The subsamples in Panel B, Panel C, and Panel D show that there is a trend of increasing coefficients during the subsample periods of 1986 - 2000, 2001 - 2010, and 2011 - 2020, indicating that businesses and investors are more aware of CSR practices, especially during the recent decade. The irregular coefficients and significant levels of CSRW do not support *H1*, indicating that there is no significant relationship between ROA and CSR disclosure. However, the increasing trend indicates that CSR disclosure would have a positive relationship with ROA, and the effects are more significant in the recent decade.

**Table 4***CSR Communication effect on ROA*

	Panel A: Full Sample 1986-2020					Panel B: Sub Sample 1986-2000				
	1	2	3	4	5	1	2	3	4	5
TTL	-0.024 (0.110)					-0.330 (0.211)				
EMP		0.239 (0.157)					-0.700** (0.337)			
ENV			0.090 (0.244)					-0.570 (0.518)		
HRT				0.823*** (0.283)					-0.918* (0.533)	
SCM					-0.100 (0.213)					-0.857* (0.480)
MTBV	1.508*** (0.185)	1.504*** (0.185)	1.512*** (0.184)	1.515*** (0.181)	1.509*** (0.186)	2.682*** (0.373)	2.613*** (0.360)	2.627*** (0.365)	2.676*** (0.364)	2.655*** (0.364)
SIZE	-0.243** (0.111)	-0.266** (0.112)	-0.250** (0.113)	-0.309*** (0.111)	-0.234** (0.116)	-1.068** (0.457)	-0.941** (0.441)	-1.037** (0.461)	-1.120** (0.447)	-1.028** (0.451)
D2A	-0.081*** (0.011)	-0.082*** (0.011)	-0.081*** (0.011)	-0.081*** (0.011)	-0.081*** (0.011)	-0.082*** (0.022)	-0.079*** (0.021)	-0.078*** (0.022)	-0.083*** (0.022)	-0.085*** (0.022)
CHS	-0.013* (0.007)	-0.014** (0.007)	-0.013* (0.007)	-0.011 (0.007)	-0.013* (0.007)	-0.007 (0.017)	-0.003 (0.017)	-0.006 (0.017)	-0.006 (0.017)	-0.006 (0.017)
N	1080	1080	1080	1080	1080	117	117	117	117	117
Adj.R <sup>2</sup>	0.345	0.347	0.345	0.351	0.345	0.551	0.561	0.547	0.554	0.555

	Panel C: Sub Sample 2001-2010					Panel D: Sub Sample 2011-2020				
	1	2	3	4	5	1	2	3	4	5
TTL	-0.149 (0.160)					-0.096 (0.184)				
EMP		0.423** (0.214)					0.349 (0.267)			
ENV			0.396 (0.353)					-0.110 (0.432)		
HRT				0.601 (0.442)					0.737* (0.425)	
SCM					0.041 (0.334)					-0.500 (0.314)
MTBV	2.367*** (0.198)	2.344*** (0.200)	2.383*** (0.196)	2.351*** (0.199)	2.371*** (0.200)	1.154*** (0.212)	1.160*** (0.212)	1.159*** (0.213)	1.186*** (0.211)	1.153*** (0.214)
SIZE	-0.280 (0.221)	-0.385* (0.211)	-0.394* (0.218)	-0.408* (0.219)	-0.347 (0.219)	-0.208 (0.128)	-0.227* (0.130)	-0.221 (0.134)	-0.251* (0.129)	-0.161 (0.135)
D2A	-0.080*** (0.017)	-0.086*** (0.017)	-0.082*** (0.017)	-0.083*** (0.017)	-0.081*** (0.017)	-0.092*** (0.017)	-0.092*** (0.016)	-0.092*** (0.017)	-0.090*** (0.016)	-0.092*** (0.017)
CHS	-0.020* (0.011)	-0.023** (0.011)	-0.019* (0.011)	-0.019* (0.011)	-0.019* (0.011)	-0.005 (0.010)	-0.005 (0.009)	-0.005 (0.010)	-0.003 (0.010)	-0.004 (0.010)
N	349	349	349	349	349	614	614	614	614	614
Adj.R <sup>2</sup>	0.526	0.531	0.526	0.528	0.524	0.284	0.287	0.284	0.287	0.286

Note: This table reports the estimates from regressing the Return on Assets (ROA) on the CSR communication measures with various financial variables. Panel A displays the results for the full sample from 1986 through 2020, while Panel B, Panel C, and Panel D displays the subsample results for the period of 1986 - 2000, 2001 - 2010, and 2011 - 2020 respectively. All the results report from the following model:  $ROA_{i,t} = \alpha + \beta_1 CSRW_{i,t} + \beta_2 MTBV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 D2A_{i,t} + \beta_5 CHS_{i,t} + \varepsilon_{i,t}$ ; The dependent variable is  $ROA_{i,t}$  = Return on Assets, and the independent variable include  $CSRW_{i,t}$  that indicates the CSR communication measures  $TTL_{i,t}$ ,  $EMP_{i,t}$ ,  $ENV_{i,t}$ ,  $HRT_{i,t}$ ,  $SCM_{i,t}$ ; Where TTL = CSRW count on sum of all four dimensions; EMP = CSRW count on Employee dimension, ENV = CSRW count on Environment dimension, HRT = CSRW count on Human Rights dimension), SCM = CSRW count on Social and Community dimension, MTBV = Market to Book Value, SIZE = Logarithm of Market Value of Equity, D2A = Debt to Assets, CHS = Closely Held Shares; Each CSRW Score is scaled by the total number of words in each annual report. All variables are winsorised at the 1% and 99% level for each year and the panel regression results are adjusted for industry and year effect. Figures in parenthesis represents the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level.

To test  $H2$ , we regress the Tobin's Q effects on CSRW adjusted with industry and year effect using MTBV as a proxy for Tobin's Q, and the results are shown in Table 5. In the full year sample of Panel A data, the results show that EMP and SCM dimensions of CSRW have positive coefficients with MTBV but ENV and HRT dimensions of CSRW have negative coefficients with MTBV, both standing at a 10% significant level. The subsamples in Panel B, Panel C, and Panel D show that there is a trend of decreasing coefficients and increasing significance levels during the subsample periods of 1986 - 2000, 2001 - 2010, and 2011 - 2020. The irregular coefficients and significant levels of CSRW do not support  $H2$ , indicating that there is no significant relationship between MTBV and CSR disclosure. However, the decreasing trend indicates that CSR disclosure would have a negative relationship with MTBV, and the effects are more significant in the recent decade.

**Table 5***CSR Communication effect on Tobin's Q*

	Panel A: Full Sample 1986-2020					Panel B: Sub Sample 1986-2000				
	1	2	3	4	5	1	2	3	4	5
TTL	-0.045 (0.038)					0.069 (0.049)				
EMP		0.017 (0.050)					0.070 (0.083)			
ENV			-0.167* (0.087)					0.020 (0.129)		
HRT				-0.189* (0.104)					0.173 (0.122)	
SCM					0.017 (0.061)					0.128 (0.112)
SIZE	0.253*** (0.039)	0.244*** (0.038)	0.249*** (0.038)	0.259*** (0.038)	0.243*** (0.038)	0.476*** (0.110)	0.485*** (0.110)	0.505*** (0.118)	0.490*** (0.105)	0.482*** (0.109)
ROA	0.160*** (0.014)	0.160*** (0.014)	0.160*** (0.014)	0.162*** (0.014)	0.161*** (0.014)	0.152*** (0.022)	0.153*** (0.022)	0.150*** (0.022)	0.153*** (0.021)	0.153*** (0.022)
D2A	0.006 (0.005)	0.006 (0.005)	0.006 (0.005)	0.007 (0.005)	0.006 (0.005)	0.007* (0.004)	0.007 (0.004)	0.006 (0.005)	0.008* (0.005)	0.008* (0.004)
CHS	0.001 (0.002)	0.001 (0.003)	0.001 (0.002)	0.001 (0.002)	0.001 (0.002)	0.005 (0.004)	0.004 (0.004)	0.004 (0.004)	0.005 (0.004)	0.004 (0.004)
N	1080	1080	1080	1080	1080	117	117	117	117	117
Adj.R <sup>2</sup>	0.377	0.376	0.379	0.379	0.376	0.609	0.604	0.601	0.609	0.606

	Panel C: Sub Sample 2001-2010					Panel D: Sub Sample 2011-2020				
	1	2	3	4	5	1	2	3	4	5
TTL	0.010 (0.039)					-0.206*** (0.078)				
EMP		-0.014 (0.052)					-0.017 (0.108)			
ENV			-0.134 (0.096)					-0.554*** (0.184)		
HRT				0.010 (0.117)					-0.703*** (0.224)	
SCM					0.075 (0.087)					-0.125 (0.105)
SIZE	0.358*** (0.061)	0.364*** (0.060)	0.379*** (0.060)	0.361*** (0.060)	0.348*** (0.060)	0.227*** (0.051)	0.212*** (0.049)	0.192*** (0.050)	0.239*** (0.050)	0.225*** (0.050)
ROA	0.166*** (0.017)	0.167*** (0.018)	0.167*** (0.017)	0.166*** (0.017)	0.166*** (0.017)	0.151*** (0.023)	0.156*** (0.023)	0.152*** (0.022)	0.155*** (0.022)	0.154*** (0.023)
D2A	0.013*** (0.005)	0.014*** (0.005)	0.014*** (0.005)	0.013*** (0.005)	0.013*** (0.005)	-0.003 (0.008)	-0.001 (0.008)	-0.004 (0.008)	-0.002 (0.008)	-0.001 (0.008)
CHS	-0.006** (0.003)	-0.006** (0.003)	-0.006** (0.003)	-0.006** (0.003)	-0.006** (0.003)	0.001 (0.003)	0.003 (0.004)	0.002 (0.004)	0.001 (0.003)	0.003 (0.004)
N	349	349	349	349	349	614	614	614	614	614
Adj.R <sup>2</sup>	0.595	0.595	0.598	0.595	0.596	0.323	0.310	0.324	0.328	0.311

Note: This table reports the estimates from regressing Market to Book Value (MTBV) on the CSR communication measures with various financial variables. Panel A displays the results for the full sample from 1986 through 2020, while Panel B, Panel C, and Panel D displays the subsample results for the period of 1986-2000, 2001-2010, and 2011-2020 respectively. All the results report from the following model:  $MTBV_{i,t} = \alpha + \beta_1 CSRW_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 D2A_{i,t} + \beta_5 CHS_{i,t} + \varepsilon_{i,t}$ ; The dependent variable is  $MTBV_{i,t}$  = Market to Book Value and the independent variables include  $CSRW_{i,t}$  that indicates the CSR communication measures  $TTL_{i,t}$ ,  $EMP_{i,t}$ ,  $ENV_{i,t}$ ,  $HRT_{i,t}$ ,  $SCM_{i,t}$ ; Where TTL = CSRW count on sum of all four dimensions; EMP = CSRW count on Employee dimension, ENV = CSRW count on Environment dimension, HRT = CSRW count on Human Rights dimension), SCM = CSRW count on Social and Community dimension, ROA = Return on Assets, SIZE = Logarithm of Market Value of Equity, D2A = Debt to Assets, CHS = Closely Held Shares; Each CSRW Score is scaled by the total number of words in each annual report. All variables are winsorised at the 1% and 99% level for each year and the panel regression results are adjusted for industry and year effect. Figures in parenthesis represents the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level



To test *H3*, we regress the stock return effects on CSRW adjusted with industry and year effect and the results are shown in Table 6. In the full year sample of Panel A data, the results show that all dimensions of CSRW have negative coefficients with RET. The negative coefficients of CSRW do not support *H3*, the higher the Employee, Environment, Human Right, and Social and Community score, the lower RET of firms' stock return, indicating a negative relationship between RET and CSR disclosure. The results are similar in Panel B and Panel C. However, there is a trend of increasing coefficient in the TTL of CSRW during the subsample periods of 1986 - 2000, 2001 - 2010, and 2011 - 2020. Panel D shows that there is a positive but insignificant coefficient. Although the positive coefficient is statistically insignificant, the results suggest that businesses and investors are more aware of the Environment dimension of CSR, especially during the recent decade. This result is consistent with the literature that New Zealand shareholders care about the firms' impacts on the environment and support mandatory disclosure of firms' climate footprint (de Villiers & van Staden, 2012). However, the increasing trend indicates that CSR disclosure would have a positive relationship with RET, and the effects are more significant in the recent decade.

**Table 6***CSR Communication effect on Stock Returns*

	Panel A: Full Sample 1986-2020					Panel B: Sub Sample 1986-2000				
	1	2	3	4	5	1	2	3	4	5
TTL	-0.282 (0.698)					-0.321 (2.051)				
EMP		-2.118** (1.000)					-1.637 (3.928)			
ENV			-0.618 (1.592)					-0.264 (4.838)		
HRT				-3.634** (1.762)					-5.463 (5.725)	
SCM					-1.805 (1.433)					-1.342 (4.891)
MTBV	1.698* (0.874)	1.726** (0.878)	1.693* (0.876)	1.628* (0.877)	1.715* (0.878)	-2.806 (5.174)	-2.709 (5.093)	-2.890 (5.060)	-2.310 (5.141)	-2.764 (5.124)
SIZE	-0.004 (0.936)	0.107 (0.941)	-0.041 (0.946)	0.221 (0.943)	0.185 (0.973)	-1.558 (5.402)	-1.159 (5.611)	-1.601 (5.702)	-1.303 (5.355)	-1.439 (5.475)
ROA	0.649** (0.280)	0.673** (0.279)	0.650** (0.280)	0.687** (0.281)	0.646** (0.280)	2.502** (1.231)	2.417* (1.238)	2.519** (1.235)	2.349* (1.228)	2.476** (1.233)
D2A	-0.082 (0.076)	-0.069 (0.076)	-0.082 (0.076)	-0.076 (0.076)	-0.082 (0.076)	0.475* (0.268)	0.471* (0.271)	0.480* (0.273)	0.438 (0.268)	0.466* (0.270)
CHS	0.059 (0.040)	0.073* (0.040)	0.061 (0.041)	0.056 (0.040)	0.062 (0.041)	0.235 (0.163)	0.238 (0.161)	0.237 (0.164)	0.222 (0.160)	0.235 (0.162)
N	1080	1080	1080	1080	1080	117	117	117	117	117
Adj.R <sup>2</sup>	0.199	0.202	0.199	0.202	0.200	0.320	0.321	0.319	0.325	0.320

	Panel C: Sub Sample 2001-2010					Panel D: Sub Sample 2011-2020				
	1	2	3	4	5	1	2	3	4	5
TTL	-0.101 (0.933)					0.099 (1.186)				
EMP		-2.416* (1.286)					-1.440 (1.588)			
ENV			-0.681 (2.194)					0.727 (2.810)		
HRT				-2.841 (2.560)					-3.208 (2.691)	
SCM					-1.399 (1.954)					-1.491 (2.098)
MTBV	-0.415 (1.526)	-0.458 (1.516)	-0.456 (1.533)	-0.409 (1.518)	-0.370 (1.525)	2.559** (1.051)	2.545** (1.064)	2.578** (1.061)	2.431** (1.063)	2.532** (1.063)
SIZE	0.233 (1.700)	0.482 (1.718)	0.290 (1.744)	0.528 (1.718)	0.439 (1.708)	-0.172 (1.135)	-0.118 (1.138)	-0.142 (1.144)	-0.013 (1.142)	0.006 (1.211)
ROA	0.731 (0.444)	0.818* (0.438)	0.741* (0.448)	0.772* (0.444)	0.735* (0.445)	0.460 (0.368)	0.475 (0.367)	0.461 (0.367)	0.476 (0.368)	0.450 (0.370)
D2A	-0.143 (0.102)	-0.110 (0.102)	-0.140 (0.102)	-0.129 (0.102)	-0.140 (0.102)	-0.160 (0.102)	-0.156 (0.101)	-0.157 (0.102)	-0.163 (0.103)	-0.163 (0.103)
CHS	-0.007 (0.074)	0.022 (0.073)	-0.005 (0.073)	-0.006 (0.073)	-0.006 (0.073)	0.028 (0.049)	0.031 (0.049)	0.029 (0.050)	0.019 (0.050)	0.026 (0.051)
N	349	349	349	349	349	614	614	614	614	614
Adj.R <sup>2</sup>	0.293	0.300	0.293	0.295	0.294	0.122	0.123	0.122	0.124	0.123

Note: This table reports the results from regressing the Stock Returns (RET) on the CSR communication measures with various financial variables. Panel A displays the results for the full sample from 1986 through 2020, while Panel B, Panel C, and Panel D displays the subsample results for the period of 1986 - 2000, 2001 - 2010, and 2011 - 2020 respectively. All the results report from the following model:  $RET_{i,t} = \alpha + \beta_1 CSRW_{i,t} + \beta_2 MTBV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 ROA_{i,t} + \beta_5 D2A_{i,t} + \beta_6 CHS_{i,t} + \varepsilon_{i,t}$ ; The dependent variable is  $RET_{i,t}$  = Stock Returns, and the independent variables include  $CSRW_{i,t}$  that indicates the CSR communication measures  $TTL_{i,t}, EMP_{i,t}, ENV_{i,t}, HRT_{i,t}, SCM_{i,t}$ ; Where TTL = CSRW count on sum of all four dimensions; EMP = CSRW count on Employee dimension, ENV = CSRW count on Environment dimension, HRT = CSRW count on Human Rights dimension, SCM = CSRW count on Social and Community dimension, ROA = Return on Assets, MTBV = Market to Book Value, SIZE = Logarithm of Market Value of Equity, D2A = Debt to Assets, CHS = Closely Held Shares; Each CSRW Score is scaled by the total number of words in each annual report. All variables are winsorised at the 1% and 99% level for each year and the panel regression results are adjusted for industry and year effect. Figures in parenthesis represents the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level.

## 5.4 Determinants of Datastream ESG scores

As for comparison, we test our hypotheses with Refinitiv Datastream scores and regress on firm characteristics. The determinants of Datastream ESG scores are Environment (EP), Social (SP), and Governance (GP).

The sample period is six years from 2015 to 2020, which are the years that ESG information is available in Datastream. Table 7 shows the impact of Datastream ESG scores on firm characteristics adjusted for industry and year effect. The regression results show that ESGC, GVP, and ENP have negative coefficients with MTBV, whereas SOP has a positive coefficient with MTBV. This means that Datastream ESG scores are mostly negatively related to MTBV, indicating a negative relationship between Datastream ESG scores and firms' Tobin's Q. All Datastream ESG scores have a significant positive coefficient with SIZE at a 1% significance level. This means that there is a significant positive relationship between Datastream ESG scores and firms' size, indicating that larger firms tend to involve more ESG components in their business strategy. All Datastream ESG scores have a negative coefficient with ROA. This means that there is a negative relationship between Datastream ESG scores and firms' ROA, indicating firms that adopt more ESG practices tend to have less return on assets. ESGC, SOP, and ENP have a significant negative coefficient with D2A, whereas only GVP has a positive coefficient with D2A. This means that Datastream ESG scores are mostly negatively related to D2A, indicating a negative relationship between Datastream ESG scores and firms' leverage ratio. All Datastream ESG scores have a significant negative coefficient with CHS. This means that there is a negative relationship between Datastream ESG scores and firms' liquidity, indicating firms that adopt more ESG practices have fewer shares held by internal or close investors.

**Table 7**

*Determinants of Datastream ESG Scores*

	ESGC	GVP	ENP	SOP
MTBV	-0.638 (0.652)	-1.586 (0.964)	-2.006*** (0.740)	0.914 (0.830)
SIZE	8.313*** (1.038)	4.942*** (1.531)	16.892*** (1.181)	8.916*** (1.212)
ROA	-0.295 (0.202)	-0.329 (0.338)	-0.390 (0.268)	-0.229 (0.245)
D2A	-0.144* (0.074)	0.055 (0.108)	-0.172* (0.096)	-0.191** (0.089)
CHS	-0.109*** (0.035)	-0.188*** (0.070)	-0.087* (0.045)	-0.105*** (0.035)
N	261	261	261	261
Adj.R <sup>2</sup>	0.402	0.240	0.563	0.413

Note: This table reports estimates from regressing the Datastream ESG scores on the various financial variables to examine determinants of Environmental, Social, and Governance (ESG) scores, which we use interchangeably as measures for CSR. The table displays the results for the sample period from 2015 through 2020, starting from the year in which Datastream has information for company ESG performance. The results report from the following model:  $ESG_{i,t} = \alpha + \beta_1 MTBV_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 D2A_{i,t} + \beta_5 CHS_{i,t} + \varepsilon_{i,t}$ ; The dependent variable  $ESG_{i,t}$  indicates the Datastream ESG scores  $ESGC_{i,t}$ ,  $GVP_{i,t}$ ,  $ENP_{i,t}$ ,  $SOP_{i,t}$ ; Where ESGC = overall company combined score based on the reported information in the environmental, social and corporate governance pillars (ESG Score) with an ESG Controversies overlay; GVP = Governance Pillar Score is the weighted average relative rating of a company based on the reported governance information and the resulting three governance category scores, ENP = Environment Pillar Score is the weighted average relative rating of a company based on the reported environmental information and the resulting three environmental category scores, SOP = Social Pillar Score is the weighted average relative rating of a company based on the reported social information and the resulting four social category scores. The independent variables include ROA = Return on Assets, MTBV = Market to Book Value, SIZE = Logarithm of Market Value of Equity, D2A = Debt to Assets, CHS = Closely Held Shares. All variables are winsorised at the 1% and 99% level for each year and the panel regression results are adjusted for industry and year effect. Figures in parenthesis represent the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level.

Table 8 shows the effects of firm characteristics on Datastream ESG scores adjusted for industry and year effect. To test the validity for  $H1$ ,  $H2$ , and  $H3$ , we regress the ROA, Tobin's Q, and Return effects on Datastream ESG scores, and the results are shown in Table 8 Panel A, Panel B, and Panel C respectively. Panel A shows that all Datastream ESG scores have insignificant negative coefficients with ROA, indicating a negative relationship between ROA and Datastream ESG scores. Since we expect a significant relationship between ROA and CSR disclosure, this result does not support  $H1$ . Panel B shows that ESGC, GVP, and ENP have a negative coefficient with MTBV, indicating a negative relationship between MTBV and ESGC, GVP, and ENP. Only SOP has a positive coefficient with MTBV, indicating a positive relationship between MTBV and SOP. We expect a significant relationship between MTBV and CSR disclosure, however, only ENP has a significant coefficient with MTBV. This result does not support  $H2$ . Panel C shows that all Datastream ESG scores have a negative coefficient with RET, indicating a negative relationship between RET and Datastream ESG scores. We expect a significant relationship between RET and CSR disclosure, however, only ESGC has a significant coefficient with RET. This result does not support  $H3$ . Overall, the results show that  $H1$ ,  $H2$ , and  $H3$  are invalid. Although the empirical results indicate no significant relationships between Datastream ESG scores and firm characteristics, the results suggest a slightly negative relationship.

Table 8

*Datastream ESG scores effect on Firm Characteristics (ROA, MTBV, and RET)*

	Panel A: ROA				Panel B: MTBV				Panel C: RET			
	1	2	3	4	1	2	3	4	1	2	3	4
ESGC	-0.024 (0.016)				-0.007 (0.008)				-0.275** (0.134)			
GVP		-0.011 (0.011)				-0.007 (0.005)				-0.096 (0.074)		
ENP			-0.021 (0.014)				-0.015*** (0.005)				-0.203 (0.151)	
SOP				-0.015 (0.017)				0.009 (0.008)				-0.152 (0.127)
MTBV	1.532*** (0.170)	1.536*** (0.168)	1.504*** (0.174)	1.567*** (0.174)					1.796 (1.198)	1.819 (1.185)	1.565 (1.230)	2.110* (1.182)
SIZE	0.417 (0.314)	0.268 (0.278)	0.570 (0.401)	0.351 (0.315)	0.470*** (0.132)	0.441*** (0.119)	0.651*** (0.140)	0.330*** (0.118)	2.472 (2.571)	0.660 (2.159)	3.611 (3.584)	1.536 (2.718)
ROA					0.218*** (0.030)	0.216*** (0.030)	0.208*** (0.030)	0.221*** (0.029)	0.554 (0.607)	0.604 (0.633)	0.556 (0.587)	0.601 (0.616)
D2A	-0.036* (0.021)	-0.032 (0.021)	-0.036* (0.021)	-0.036* (0.021)	-0.030*** (0.010)	-0.028*** (0.009)	-0.031*** (0.010)	-0.027*** (0.009)	0.022 (0.162)	0.067 (0.160)	0.027 (0.166)	0.033 (0.162)
CHS	-0.029*** (0.011)	-0.029*** (0.010)	-0.028*** (0.010)	-0.028*** (0.011)	-0.002 (0.004)	-0.003 (0.004)	-0.003 (0.004)	-0.000 (0.004)	-0.032 (0.083)	-0.020 (0.083)	-0.019 (0.083)	-0.018 (0.083)
N	261	261	261	261	261	261	261	261	261	261	261	261
Adj.R2	0.549	0.547	0.549	0.547	0.578	0.581	0.589	0.579	0.119	0.108	0.117	0.109

Note: This table reports the estimates from regressing the performance variable on the Datastream ESG scores with the various financial variables. Panel A shows the regression examining the relationship of Return on Assets (ROA) on Datastream ESG scores and other financial variables by using the following model:  $ROA_{i,t} = \alpha + \beta_1 ESG_{i,t} + \beta_2 MTBV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 D2A_{i,t} + \beta_5 CHS_{i,t} + \varepsilon_{i,t}$ ; Panel B shows the regression examining the relationship of Market to Book Value (MTBV) on Datastream ESG scores and other financial variables by using the following model,  $MTBV_{i,t} = \alpha + \beta_1 ESG_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 D2A_{i,t} + \beta_5 CHS_{i,t} + \varepsilon_{i,t}$ ; Panel C shows the regression examining the relationship of Stock Returns (RET) on Datastream ESG scores and other financial variables by using the following model,  $RET_{i,t} = \alpha + \beta_1 ESG_{i,t} + \beta_2 MTBV_{i,t} + \beta_3 SIZE_{i,t} + \beta_4 ROA_{i,t} + \beta_5 D2A_{i,t} + \beta_6 CHS_{i,t} + \varepsilon_{i,t}$ ; The dependent variables are  $ROA_{i,t}$  = Return on Assets,  $MTBV_{i,t}$  = Market to Book Value, and  $RET_{i,t}$  = Stock Returns in Panel A, Panel B, and Panel C respectively. The independent variable include in the regressions are MTBV= Market to Book Value, SIZE = Logarithm of Market Value of Equity, ROA = Return on Assets, D2A = Debt to Assets, CHS = Closely Held Shares; All variables are winsorised at the 1% and 99% level for each year and the panel regression results are adjusted for industry and year effect. Figures in parenthesis represents the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level.

## 6. Conclusion

This study uses a CSR dictionary created by Pencle and Malaescu (2016) and references their four dimensions of CSR including employee, environment, human rights, and social and community to measure firms' total CSRW score and individual dimension scores. We measure these scores by calculating the frequency of CSRW and the individual dimensions of CSRW disclosed in the firms' annual reports. We use annual reports as our data sample source because they are reliable and commonly used by investors to retrieve company CSR information and investigate firm performance (Myšková & Hájek, 2019). 34 years (1986-2020) of annual reports from 123 New Zealand listed companies are used as our sample for this study.

Literature suggests that CSR activities influence firm performances including ROA, Tobin's Q, and stock return. However, the results in this study do not support the positive and significant relationship between CSR and ROA, Tobin's Q, and stock return. We regress three sets of panels in Table 4, Table 5, and Table 6, and use Panel A, Panel B, Panel C, and Panel D to report the data for the full period of 1986 - 2020, 1986 – 2000, 2001 – 2010, 2011 – 2020 respectively. The results show that there is an increasing trend in the relationships between CSR and ROA, Tobin's Q, and stock return, which is consistent with the fact that investors are more aware of firms' sustainability strategy and corporate social responsibility.

The methodology of using the CSR dictionary has limitations as Pencle and Malaescu (2016) extracted the CSRW and created the dictionary based on US firms' annual report disclosure, and some of the CSRW may be irrelevant to New Zealand firms. Considering New Zealand's specific societal context, some CSRW related to New Zealand might not be captured in the dictionary. The robustness test of CSRW scores and Datastream ESG scores indicate that CSRW scores are not completely interchangeable measures to the third-party evaluation scores. However, as a result of globalisation, countries should be able to have similar focuses on CSR reporting in their annual reports due to the rising concern. Further research may use sample firms from other countries and test whether the CSR dictionary is a fair evaluation of other countries.

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# Appendices

## Appendix A

### Wordlists for Employee dimension of CSR

#### Company Name (123 Companies)

AFC Group Holdings	AUST.FNDTN.INV. (NZE)
AFT PHARMACEUTICALS	AUCKLAND INTL.AIRPORT
AIR NEW ZEALAND	ALLIED FARMERS
AMP (NZE) DEAD - DELIST.05/02/22	AUS.AND NZ.BANKING (NZE) GP.
ASSET PLUS	ARBORGEN HOLDINGS
ARGOSY PROPERTY	ARVIDA GROUP
THE A2 MILK COMPANY	BURGER FUEL GROUP
BLACKWELL GLOBAL HOLDINGS	BRISCOE GROUP AUSTRALASIA
BANKERS INVESTMENT (NZE)	BLIS TECHNOLOGIES
BARRAMUNDI	BREMWORTH
CDL INVESTMENTS NZ.	CONTACT ENERGY
COOKS GLOBAL FOODS	COLONIAL MOTOR
CHORUS	CHATHAM ROCK (NZE) PHOSPATE
COMVITA	DELEGAT GROUP
DOWNER EDI	EBOS GROUP
ENPRISE GROUP	EROAD
EVOLVE EDUCATION GROUP	FLETCHER BUILDING
FONTERRA COOPERATIVE GP.	F&C INV.TST. (NZE) PLC
FISHER & PAYKEL HLTHCR.	FREIGHTWAYS
FONTERRA SHAREHOLDERS FUND UNITS	FOLEY WINES
GENERAL CAPITAL	GEO
GENEVA FINANCE	GOODMAN PROPERTY TRUST UNITS
GENESIS ENERGY	GOOD SPIRITS HOSPITALITY
GENTRACK GROUP	GREEN CROSS HEALTH
HENDERSON FAR EAST (NZE) INC.	HALLENSTEIN GLASSON HDG.
INFRATIL	IKEGPS GROUP
INVESTORE PROPERTY	JUST LIFE GROUP
KINGFISH	KMD BRANDS
KIWI PROPERTY GROUP	LIVESTOCK IMPROVEMENT CORPORATION
MLLM.& CPTH.HTLS.NZ.	MERCURY NZ
MERIDIAN ENERGY	MAINFREIGHT
MHM AUTOMATION	MICHAEL HILL INTL. (NZX)
MARLIN GLOBAL	MARSDEN MARITIME HDG.
METRO PERFORMANCE GLASS	MARLBOROUGH WINE ESTATES GROUP
NEW TALISMAN GOLD MINES	NZ WINDFARMS
NEW ZEALAND KING SALMON INVESTMENTS	NZME
NEW ZEALAND OIL AND GAS	THE NEW ZEALAND REFINING COMPANY
	OCEANIA HEALTHCARE TECHNOLOGY
NZX	INVESTMENTS
PRECINCT PROPERTIES NEW ZEALAND	PACIFIC EDGE
PROPERTY FOR INDUSTRY	PGG WRIGHTSON
PORT OF TAURANGA	PUSHPAY HOLDINGS
PAYSAUCE	RAKON

RESTAURANT BRANDS NZ.  
SANFORD  
SCOTT TECHNOLOGY  
SOLUTION DYNAMICS  
SKY CITY ENTM.GP.  
SERKO  
SYNLAIT MILK  
STRIDE PR.& STRIDE INVMGT.  
SOUTH PORT NEW ZEALAND  
STEEL & TUBE HOLDINGS  
CITY OF LONDON (NZE)  
T&G GLOBAL  
MOVE LOGISTICS GROUP  
TILT RENEWABLES DEAD - DELIST.04/08/21  
TURNERS AUTOMOTIVE GROUP  
TOWER  
VISTA GROUP INTERNATIONAL  
VITAL  
WELLINGTON DRIVE TECHS.  
Z ENERGY

RYMAN HEALTHCARE  
SCALES  
SMITHS CITY GROUP SUSP - SUSP.18/03/21  
SEEKA  
SKELLERUP HOLDINGS  
SKY NETWORK TV  
SOUTHERN CHARTER FINANCIAL GROUP  
SPARK NEW ZEALAND  
SMARTPAY HOLDINGS  
SUMMERSET GROUP HOLDINGS  
TEMPLETON EMRG. (NZE) MKTS.IT.  
TOURISM HOLDINGS  
TELSTRA  
TRUSTPOWER  
TRUSCREEN GROUP  
VECTOR  
VITAL HEALTHCARE PROPERTY TRUST UNITS  
WESTPAC BANK (NZE)  
WAREHOUSE GROUP

## Appendix B

### Wordlists for Employee dimension of CSR

#### Employee (318)

Abuse	Accommodating	Accommodation	Accountability
Adopted Child	Adopted Children	African American	African Americans
Aged	Alcohol	Alternative Lifestyle	Alternative Lifestyles
Americans With Disabilities			
Act	Balancing	Bathrooms	Believing
Beneficially	Beneficiary	Benefit	Benefits
Blended Families	Body	Bonus	Boundaries
Bylaws	Care	Certification	Certifications
Certify	Certifying	Civil	Claims
Class	Collective Well-Being	Collective Well-Beings	Contribution
Cultures	Custodian	Customs	Development
Died	Dies	Director	Disability
Discriminating	Discrimination	Discriminatory	Diverse
Diversification	Diversified	Diversify	Diversifying
Diversity	Drug	Educate	Educating
Education	Educational Programs	Educational	Elected
Employ	Employed	Employee	Employee Equity
Employee Involvement	Employee Relations	Employee Safety	Employee Welfare
Employee Well-Being	Employee	Employees Well-Being	Employee's Well-Being
Employees	Employees'	Employer	Employers
Employers'	Employing	Employment	Employs
Empower	Empowered	Empowering	Empowerment
Empowers	Enabling	Engage	Engaging
Enhancements	Enhancing	Enjoyable	Environment
Equal Opportunity	Equal	Equity	Ergonomically
Ethic	Ethically	Ethnic Diversity	Ethnic
Ethnicities	Ethnicity	Even Distribution	Even
Evenly Distributed	Exercise	Experience	Experienced
Extended Families	Extended Family	Fair	Fairness
Families	Family	Female	Fiduciary
Freedom	Gay	Gays	Gender Diversity
Goal	Goals	Governance	Green Card
Hard Work	Health Benefits	Health Care Benefits	Health Insurance
Health	Healthcare	Healthcaring	Healthy
Hire	Hiring	Humanitarian	Humans
Incentives	Individual	Individually	Infringe
Infringement	Infringing	Insurance	Internal Stakeholder
Internal Stakeholders	Involved	Jobs	Knowledge
Knowledgeable	Knowledgebase	Labor Rights	Labor
Laborers	Lawfulness	Laws	Leader
Leaders	Leadership	Learned	Learning
Legal	Lesbian	Lesbians	Life Benefits
Life partner	Lifestyles	Lives	Living
Management	Mate	Meals	Medicaid
Medicare	Medicinal	Minorities	Minority
Mission	Moral	Mortality	Multinational

Native	Nonemployee	Nonrenewal	Occupational
Officer	Officers	Outsourcing	Paid Time Off
Paid Vacation Time	Paid	Participant	Participants
Participating	Participatory	Parties	Partner
Payroll	Peer	Pension	People
Performance	Performers	Person	Personal
Personnel	Persons	Philosophies	Positions
Practices	Prejudiced	Prescribed	Principles
Privileges	Productivity	Professional	Professionals
Profit Sharing	Promotion	Protected	Quality
Race	Rape	Rate	Reallocate
Reallocated	Recognition	Recognize	Recognized
Regulate	Regulations	Regulatory	Reimburse
Relations	Relationship	Relationships	Religious Diversity
Religious	Respects	Responsibility	Responsible
Retirement	Right	Role	Safe
Safety	Salaries	Satisfaction	Scholarships
Seasonal	Selection	Sensitivity	Served
Serves	Service	Services	Sexually
Shared Norms	Sick	Size	Social Wellbeing
Social	Socially	Spousal Relationship	Spousal Relationships
Spouse	Stakeholders	Strengths	Suitability
Suitable	Sustain	Sustains	Talented
Team	Teams	Teamwork	Tenure
Trained	Trust	Truthfulness	Tuition Reimbursement
Understand	Undocumented Aliens	Undocumented	Unemployable
Unemployment	Unethical	Unfair	Union
Unionized	Unions	Unproductive	Unsafe
Vacation Time	Vision Benefit	Vision Benefits	Wage
Wear	Welfare	Wellness	Wheelchair Access
Wheelchair	Wheelchairs	Wife	Women
Work	Workday	Worker	Workers
Workers'	Workforce	Workforces	Working Class
Working Men and Women	Work-Life-Balance	Workmen	Workplaces
Works	Workspaces		



## Appendix C

### Wordlists for Environment dimension of CSR

#### Environment (464)

Abuse	Accept	Accepted	Accommodating
Accommodation	Accountability	Acid Rain	Acid Rains
Activities	Adopt	Adopted	Adverse
Adversely	Affluence	Affluences	Agreements
Agricultural	Agriculture	Agro	Aids
Air Filtration	Alternative Energy	Amazon Rain Forest	Amazon
Ancient Ruins	Animal	Anti	Arms
Assurance	Attention	Attributable	Audit
Auditor	Auditors	Authenticate	Authenticity
Awareness	Balancing	Barge	Baselines
Basin	Beautiful	Beauty	Beneficially
Beneficiary	Benefit	Benefits	Bio diversities
Biodiversity	Board	Body	Boundaries
Bribe	Broad	Bromides	Bromine
Bromines	Building	Bull	Burn
Bylaws	Cage	Caged Animal	Caged Animals
Carbon Dioxide	Carbon Dioxides	Carbon Disclosure	Carbon Disclosures
Carbon Emission	Carbon Emissions	Carbon	Carbonate
Carbonated	Carbonates	Carbons	Carrying Capacities
Carrying Capacity	Carrying Load	Carrying Loads	Catastrophic
Chemicals	Chloride	Chlorine	City
Civil	Clean Energies	Clean Energy	Climate Change
Climate Change	Climate Event	Climate	CO2
Code	Collective Well-Being	Conflict Mineral	Conflict Minerals
Conservation	Conservationist	Conservationists	Conservations
Conserve	Corn	Corporate	Counties
Countries	Country	Covenants	Crops
Crud	Cultivation	Custodian	Customs
Cycle	Delegation	Demographic	Depleted
Depletes	Depleting	Depletion	Depletions
Design	Dioxide	Dioxides	Disclosing
Disclosure	Disposal	Diverse	Diversification
Diversified	Diversify	Diversifying	Double Bottom Line
Dwindling	Easements	Ecological	Eco-System
Eco-Systems	Educate	Educating	Education
Educational	Efficiencies	Efficiently	Emission
Emissions	Employ	Energy Efficiencies	Energy Efficiency
Energy Efficient	Energy Star	Enhancements	Enhancing
Environment	Environmental Activism	Environmental Activist	Environmental Activists
Environmental Activities	Environmental Activity	Environmental Disclosure Environmental Management Systems (EMS)	Environmental Disclosures
Environmental Impact	Environmental Inclination	Environmental Position	Environmental Performance
Environmental Policies	Environmental Policy	Environmental Reformation	Environmental Positions
Environmental Protection Agency	Environmental Reform		Environmental Resource

Environmental Resources	Environmental Responsibilities	Environmental Responsibility	Environmental Safety
Environmental Stance	Environmental Stewardship	Environmental	Environmentalism
Environmentalists	Environmentally Friendly	Environmentally Inclined	Environmentally Safe
Environmentally	EPA Standards	EPA	Equip
ESG	Ethic	Ethically	Evolution
Exceed Capacity	Exceeded Capacity	Exceeds Capacity	Excess Capacities
Excess Capacity	Exit	Expand	Facility
Fair	Fairness	Farm Fresh	Farm
Farmer	Farmland	Farmlands	Flammability
Flies	Foodservice	Fossil	Fossils
Free Range Animal	Free Range Animals	Free Range Animals	Free Range
Free	Freedom	Fundraising	Funds
Genetically Modified	Global Warming	Global Warming	Gold
Good Profit	Green Building	Green Buildings	Green Engineering
GRI Frameworks	GRI Ratings	GRI Standards	GRI
Groundwater	Groves	Grow	Guidelines
Harm	Harmony	Harness Wind Energy	Harness Wind Power
Hazardous Waste	Hazardous	HCFC	Historic Sites
Humanitarian	Humans	Hungry	Hybrid Car
Hybrid Energy	Hybrid Vehicle	Hybrid Vehicles	Hybrid
Hydrogen-Power	Hydrogen-Powered	Hydro-Power	Hydro-Powered
IIRC	Impairments	Implementing	Improve
Improvements	Incentives	Indemnification	Independent
Indications	Infringe	Infringement	Infringing
Innovation	ISO	KLD Categories	KLD Standards
KLD	Land Conservation	Land Conservationism	Land Conservationist
	Lifestyle Of Health And Sustainability	Lives	Living
Land Conservationists	Maintenance	Maps	Material Stewardship
Locale	Maximum Capacities	Maximum Capacity	Meaningful
Materials	Migration	MSCI	Natural Resource
Members	Natural	Nature	Nuclear
Natural Resources	Overcapacity	Oxidation	Ozone Depleting
Organic	Ozone Depletions	Ozone	Petroleum
Ozone Depletion	Plant	Pollutant	Pollutants
Pipelines	Pollution Prevention	Pollution	Power
Polluting	Preservation	Preserve Way of Life	Preserve
Practices	Prevention	Pro Environmental	Purification
Preserves	Rainforest	Reasonable	Rebuilding
Quality	Reduce	Reduces	Regulate
Recoverable	Renewable Energies	Renewable Energy	Renewable
Renew	Renewals	Renewed	Renewing
Renewal	Research	Researchers	Reserve
Requirements	Reservoir	Resource Conservation	Resource Conservationism
Reserves	Resource		
Resource Conservationist	Conservationists	Respects	Responsibility
Responsible	Reusable	Reuse	Reuses
Right	River	Royalties	Safe
Safety	Saltwater	Science	Scientifically

Scientists	Seasonal	Seasonally	Seed
Selection	Sensitivity	Shipyards	Shore
Shrinking	Site	Smart Growth	Solar
Solubility	Solvents	Sourcing	Stakeholders
Stewardship	Suitability	Suitable	Sulfur
		Sustainable	
Surveys	Sustain	Consumption	Sustainable
Symbiotic Relationship	Symbiotic Relationships	Symbiotic	Target
Technologies	Temperature Rise	Terrorist	Threat
Tornadoes	Tradeoffs	Transparency	Transparent
Tree	Triple Bottom Line	Truthfulness	Turbine
Unavoidable	Unbiased	Underutilization	Underutilized
Uneconomic	Uneconomical	Uneconomically	Unethical
Unfair	Unproductive	Unprofitably	Unrestricted
Unsafe	Unusable	Uprooting	Urbanization
Vegetables	Volcanic	Voluntarily	Voluntary Disclosure
Voluntary Disclosures	Voluntary	Vulnerability	Vulnerable
Warm	Waste Reduction	Waste	Wasteland
Water Desalination	Water Purification	Water Purifications	Water
Wave	Weather	Wetland	Wetlands
Wilderness	Wildlife Conservation	Wind Energies	Wind Energy
Wind	Windmill	Wood	World
Wrongdoing	Wrongfully	Yard	Yields
Zone	Zones	Zoning	

## Appendix D

### Wordlists for Human Rights dimension of CSR

#### Human Rights (309)

Aboriginal Peoples	Aboriginals	Abuse	Accept
Accepted	Accommodating	Accommodation	Accountability
Activities	Acts	Adopt	Adopted
Adverse	Adversely	African American	African Americans
African	Africans	Aged	Agent
Ages	Agreements	Aids	Alaska Native
Alaskan Natives	Alternative Lifestyle	Alternative Lifestyles	Alternative Lives
Avoid	Award	Awareness	Balancing
Baselines	Belonging	Beneficially	Beneficiary
Benefit	Benefits	Bylaws	Care
Certification	Certifications	Certify	Certifying
Charitable	Civil Liberties	Civil Liberty	Civil Rights
Civil	Claims	Class	Coach
Commitments	Committee	Communities	Community
Constitution	Constitutional Right	Constitutional Rights	Core
Covenants	Cross-Culturalism	Cross-Culturalisms	Cultures
Custodian	Development	Died	Dies
Disability	Disabled	Disadvantage	Disadvantaged
Disadvantageous	Disadvantages	Disasters	Discriminating
Discrimination	Discriminatory	Diverse	Diversification
Diversified	Diversify	Diversifying	Diversity
Duty	Educate	Educating	Education
Educational	Elected	Election	Employ
Employed	Employee Involvement	Employee Involvements	Employee
Employees	Employees'	Employing	Employment
Empower	Empowered	Empowering	Empowerment
Empowers	Enabling	Engage	Engaging
Enhancements	Enhancing	Entitled Rights	Equal Opportunities
Equal Opportunity	Equal	Equality	Equity
Ergonomically	Ethic	Ethical	Ethically
Ethnic Diversities	Ethnic Diversity	Ethnic Mosaic	Ethnic Mosaics
Ethnic	Ethnically	Ethnicities	Ethnicity
Exercise	Eyes	Face	Fair
Fairness	Families	Family	Female
Fiduciary	First Nations	First Peoples	Free
Freedom	Gay	Gays	Gender Diversities
Gender Diversity	Gender	Genders	God Given Right
God Given Rights	Governance	Habitat	Hazardous
Healthcare	Healthcaring	Hire	Hiring
Honest	Honesty	Human Development	Humanitarian
Humans	Hungry	Imprisonment	Inclusive
Inclusiveness	Infringe	Infringement	Infringing
Interests	Involuntarily	Involuntary	Involve
Involved	Involvement	Labor Issue	Labor Issues
Labor Right	Labor Rights	Labor	Lawful
Lawfulness	Laws	Legal	Legality

Lesbian	Lesbians	Life partner	Lifestyles
Mate	Medicaid	Medicare	Medicinal
Minorities	Minority	Mission	Nationality
Nationalization	Nationalize	Native Peoples	Native
Natives	Natural Rights	Oppressive Regime	Oppressive Regimes
Original Settlers	Outsiders	Outsource	Outsources
Outsourcing	Ownership	Parties	Partner
Partner	Partnerships	Payroll	Peer
Pension	People	Performance	Performers
Person	Personal	Personnel	Persons
Philanthropy	Philosophies	Plurality	Poor
Prejudiced	Prejudices	Preservation	Privileges
Protected	Protections	Race	Races
Racial	Rape	Reallocate	Reallocated
Rebuilding	Recognition	Regulate	Regulations
Regulatory	Relations	Relationship	Relationships
Religious Diversities	Religious Diversity	Religious	Reservation
Respect For Human			
Rights	Respect For Privacy	Retirement	Right
Rights To Citizenship	Safety	Salaries	Same Sex
Scholarships	Sexually	Shared Norms	Sick
Social	Spouse	Strengths	Talented
Teamwork	Unalienable Rights	Unbiased	Unconditional
Underrepresented Group	Underrepresented Groups	Unemployable	Unemployment
Unethical	Unfair	Unionized	Unions
Unlawful	Vote	Voting	Vulnerability
Wellness	Wheelchair Access	Wheelchair	Wheelchairs
Women	Workday	Worker	Workers'
Workforce	Workforces	Workplaces	Workspaces

## Appendix E

### Wordlists for Social and Community dimension of CSR

#### Social and Community (361)

Abuse	Abused	Abuses	Accept
Accepted	Accommodating	Accommodation	Accompanied
Accountability	Accountancy	Activities	Adopt
Adopted	Affordable Housing	Affordable	Aged
Ages	Aids	American	Arms
Beneficially	Beneficiary	Benefit The Masses	Benefit
Benefits	Bribe	Building	Certification
Certifications	Certify	Certifying	Charitability
charitable foundation	Charitable Giving	Charitable	Charitably
Charities	Charity	Charity	Child Labor
Child Laborers	Civic Duties	Civic Duty	Civic Engagement
Civic Engagements	Civic	Civil	Class
Clean	Cleaned	Cleaner	Cleaning
Cleanliness	Cleanup	Collective Well-Being	Collective Well-Beings
Collectively	Commitments	Common	Communal
		Community	
Communities	Community Development	Developments	Community Group
Community Groups	Community Impact	Community Minded	Community Mission
Community Outreach	Community Policies	Community Policy	Community Project
Community Projects	Community	Concern	Conflict Mineral
Conflict Minerals	Contribution	Corporate Foundation	Countries
Country	County	CSR	Cultural Preservation
Cultures	Custodian	Delegation	Demographic
Development	Diet	Disability	Disable
Disabled	Disclosure	Disclosures	Diverse
Diversification	Diversified	Diversify	Diversifying
Diversity	Drinking	Educate	Educating
Education	Educational	Elected	Election
Employ	Employed	Employing	Employment
Employs	Empower	Empowered	Empowering
Empowerment	Empowers	Enabling	Engage
Engaging	Equal	Ethic	Ethically
Fairness	Families	Family	Female
Food Pantries	Food Pantry	Foodbank	Foodbanks
Freedom	Fund	Fundraising	Funds
Future	Future Generation	Future Generations	Giving
Government	Governments	Groups Of Stakeholders	Habitat
Healthcare	Healthcaring	Help	Hope
Human Being	Human	Humanitarian	Humans
		Impact on Local	Impact on Local
Hungry	Impact on Community	Communities	Community
Impact on Society	Improve	Improvements	Indigenous
Indigenous People	Indigenous Peoples	Innovation	Intelligence
Involve	Involved	Involvement	Jeopardize
Jeopardized	Jeopardizes	Jeopardizing	Job Creation
Labor	Lawfulness	Laws	Lead

Leadership	Learned	Learning	Legal
Less Fortunate	Life Benefits	Lifestyles	Lives
Living	Local Community	Local Development	Local Developments
Locale	Meaningful	Medicaid	Medicare
Medicinal	Minimize	Minority	Mission
Moral	Mortality	Multinational	Native People
Native Peoples	Native	Natural	Naturally
Nature	Not For Profit	Open	Oppressive Regimes
Organizational			
Involvement	Organization's Involvement	Orphan	Orphans
Outperform	Outsource	Outsources	Outsourcing
Ownership	Owns	Participant	Participants
Participating	Parties	Partner	Partners
Partnerships	Party	People Group	People Groups
People	Performance	Performers	Person
Personal	Persons	Philanthropic	Philanthropies
Philanthropy	Philosophies	Plan	Plurality
Poor Individual	Poor Individuals	Poor People	Poor
Prejudiced	Prejudices	Preservation	Preserve Culture
Prevented	Principles	Privileges	Profit Sharing
Projects	Protected	Protections	Publicly
Race	Rape	Rebuilding	Recognition
Recognize	Recognized	Recovery	Redeemable
Reduce	Reduces	Regulate	Regulations
Regulatory	Relations	Relationship	Relationships
Reliability	Religious	Rely	Renew
Renovation	Respect	Respects	Responsibility
Responsible	Role	Safe	Safety
Scholarships	Service	Services	Shared Norms
Sick	Social Activities	Social Inclination	Social Issue
Social Issues	Social Policies	Social Policies	Social Policy
Social Policy	Social	Socially Inclined	Socially Minded
			Societal
Socially	Societal	Societal Development	Developments
Societal Developments	Societal Impact	Sponsors'	sponsorship
Stakeholders	Sustain	Sustainability	Sustainable
Sustained	Sustaining	Sustains	Sweat Shops
Talented	Team	Teams	Trained
Transparency	Transparent	Trust	Trustees
Truthfulness	Unconditional	Unemployable	Unethical
Unfair	Unfriendly	Unionized	Unions
United	Unrestricted	Unsafe	Uprooting
Urban Planning	Urban	Urbanization	Voluntarily
Voluntary	Volunteer	Volunteerism	Volunteers
Vote	Voting	Vulnerability	Vulnerable
Water	Waters	Well-Being	Well-Beings
Wellness	Women	Work	World
Wrongdoers	Wrongdoing	Wrongfully	Zone
Zones			

## Appendix F

### Determinants of CSR communication 2015-2020

This table shows the impact of CSR communication measures on firm characteristics adjusted for industry and year effect for the sample period from 2015 to 2020.

	TTL	EMP	ENV	HRT	SCM
MTBV	-0.076** (0.030)	-0.024 (0.025)	-0.027** (0.012)	-0.039*** (0.009)	-0.008 (0.011)
Size	0.078* (0.042)	0.022 (0.028)	-0.043** (0.017)	0.039*** (0.014)	0.111*** (0.019)
ROA	-0.003 (0.013)	0.007 (0.009)	-0.003 (0.005)	0.004 (0.004)	-0.012** (0.005)
D2A	-0.005 (0.004)	0.004 (0.003)	-0.005*** (0.002)	-0.000 (0.001)	-0.002 (0.002)
CHS	-0.011*** (0.002)	0.000 (0.002)	-0.003*** (0.001)	-0.003*** (0.001)	-0.002* (0.001)
N	409	409	409	409	409
Adj. R <sup>2</sup>	0.282	0.159	0.319	0.417	0.242

Note: This table reports estimates from regressing the CSR communication measures on the various financial variables to examine determinants of CSRW count for the sample period 2015 - 2020. Figures in parenthesis represents the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level.

See notes in Table 3 for variable details.



## Appendix G

### CSR Communication effect on Firm Characteristics (ROA, MTBV, and RET)

Panel A, Panel B, and Panel C reports the ROA, Tobin's Q, and Return effects on CSR Communication respectively from 2015 to 2020. This is the period where Datastream ESG scores are available, and the results can be used to compare the relationship and validity of the results we obtain.

	Panel A: ROA					Panel B: MTBV					Panel C: RET				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
TTL	-0.055 (0.231)					-0.207** (0.102)					0.604 (1.478)				
EMP		0.258 (0.328)					-0.134 (0.150)					-1.807 (2.157)			
ENV			-0.343 (0.527)					-0.433* (0.227)					3.261 (3.313)		
HRT				0.494 (0.504)					-0.799*** (0.285)					-2.366 (2.984)	
SCM					-0.823** (0.384)					-0.093 (0.125)					-0.863 (2.604)
MTBV	1.126*** (0.234)	1.135*** (0.236)	1.120*** (0.235)	1.148*** (0.235)	1.113*** (0.236)						1.610* (0.972)	1.520 (0.955)	1.650* (0.969)	1.471 (0.967)	1.557 (0.966)
SIZE	-0.186 (0.149)	-0.196 (0.151)	-0.205 (0.159)	-0.210 (0.150)	-0.097 (0.157)	0.229*** (0.067)	0.219*** (0.066)	0.196*** (0.066)	0.241*** (0.066)	0.227*** (0.067)	-0.190 (1.369)	-0.103 (1.369)	-0.003 (1.370)	-0.051 (1.359)	-0.047 (1.481)
ROA						0.174*** (0.029)	0.178*** (0.030)	0.174*** (0.030)	0.175*** (0.029)	0.176*** (0.030)	0.955** (0.448)	0.966** (0.449)	0.964** (0.447)	0.962** (0.450)	0.943** (0.456)
D2A	-0.100*** (0.021)	-0.100*** (0.021)	-0.101*** (0.021)	-0.099*** (0.021)	-0.100*** (0.021)	0.002 (0.011)	0.003 (0.011)	0.001 (0.011)	0.003 (0.010)	0.003 (0.011)	-0.112 (0.123)	-0.108 (0.123)	-0.099 (0.121)	-0.115 (0.124)	-0.117 (0.125)
CHS	-0.006 (0.012)	-0.005 (0.012)	-0.006 (0.012)	-0.004 (0.012)	-0.007 (0.012)	0.001 (0.004)	0.004 (0.005)	0.002 (0.005)	0.001 (0.004)	0.003 (0.005)	0.022 (0.059)	0.016 (0.061)	0.027 (0.060)	0.008 (0.061)	0.014 (0.063)
N	409	409	409	409	409	409	409	409	409	409	409	409	409	409	409
Adj. R <sup>2</sup>	0.304	0.305	0.305	0.305	0.311	0.335	0.326	0.332	0.345	0.325	0.124	0.125	0.125	0.124	0.123

Note: This table reports the estimates from regressing the performance variables on the CSR communication measures with various financial variables. Panel A, Panel B, and Panel C shows the regression examining the relationship of Return on Assets (ROA), Market to Book Value (MTBV) and Stock Returns (RET) on CSR communication measures and other financial variables respectively. Figures in parenthesis represents the standard error. \*\*\* Significant at a 1% level, \*\* Significant at a 5% level, \* Significant at a 10% level. See notes in Table 4, 5, and 6 for variable details.