The Value Relevance of Corporate Social Responsibility (CSR) Assurance

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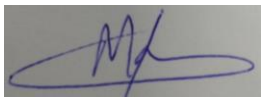
Attestation of Authorship

I, Manal Salman, 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.

Manal Salman

28h June 2016



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Abstract

This dissertation examines the association between corporate social responsibility (CSR) assurance and firm value. This study contributes to the understanding of the economic benefits inherent in CSR assurance by investigating the incremental value added to firms by assurance. This study also explores CSR assurance quality in both Australia and New Zealand, two countries that are rarely examined. The research adopts a signalling theory view of CSR assurance, where assurance acts as a signal of disclosure quality. The quality of assurance statements has been examined using a content analysis approach. Content analysis generates quality scores that enable quantitative analysis of the effects of CSR assurance quality on firm value.

The results show that CSR assurance is value-relevant, but assurance quality is not. Results remained true even after controlling for CSR performance, country and industry effects. The current study also finds that CSR assurance quality is lower when produced by an accountant, and that better governance mechanisms increase assurance statement quality.

In addition to the CSR assurance quality score, scholars associate several other attributes with assurance quality. These attributes include the level of assurance and the type of assurance provider. The level of assurance and the type of assurance provider constitute signals about CSR assurance quality. These attributes are also examined to determine their effect on firm value. The results do not show any significant effect of CSR assurance quality on firm value, either from the overall assurance quality score or from the attributes of quality.

This research has implications for companies, standard setters and assurance providers. Companies may benefit from adopting CSR assurance. Since the quality of assurance does not

communicate any effective signal, it may be important for companies, standard setters and assurance providers to collaborate to improve assurance standards to achieve higher quality, in order to minimise the possibility of falsified signalling through substandard reporting and poor assurance quality. There are many opportunities for future research on the economic benefits of CSR assurance. Future research should look into conducting a longitudinal study on CSR assurance quality. Future research should also examine the effect of assurance and its quality on firm value at different points of time and with various types of CSR disclosure.

The Value Relevance of Corporate Social Responsibility (CSR) Assurance

Chapter One: Introduction

1.1 Overview of CSR Assurance

The increase in corporate social responsibility (CSR) reporting and the publication of social and environmental reports have been accompanied by an increasing interest in the credibility and reliability of these reports. Hence, external assurance has emerged as a way of providing independent verification of the information presented in CSR reports.

The literature on CSR disclosure is voluminous and diverse. Several studies document an association between companies' financial performance and their environmental and social performance (e.g., Clarkson, Li, Richardson, & Vasvari, 2008; Van der Laan, Van Ees, & Van Witteloostuijn, 2008). CSR performance and disclosure can influence the perceptions of investors about the firm's value. Specifically, positive CSR performance can affect investors' judgements and can increase their willingness to pay more for the equity of the firm (Brown-Liburd, Cohen, & Zamora, 2012; Brown-Liburd & Zamora, 2015). If this willingness to spend more spreads to more investors, then it is likely to reduce the cost of equity capital (Elliott, Jackson, Peecher, & White, 2014), which is consistent with findings from studies that utilise archival information (e.g., Dhaliwal, Li, Tsang, & Yang, 2011; Plumlee, Brown, Hayes, & Marshall, 2015). Dhaliwal et al. (2011) found that firms practicing regular CSR disclosure are attractive to institutional investors and raise more equity capital. Plumlee et al. (2015) found that the quality of environmental disclosure is associated with firm value, resulting in increased cash flows and reduced cost of equity capital.

The credibility of CSR information has been criticised. CSR assurance plays an important role in boosting report users' (investors') confidence. Hodge, Subramaniam, and Stewart (2009) found that CSR assurance improved perceptions of the credibility and reliability of information contained in sustainability reports. Indeed, benefits of voluntary assurance on

non-financial disclosures include reducing information asymmetry between the company and the stakeholders (Blackwell, Noland, & Winters, 1998; Dhaliwal et al., 2011; Dhaliwal, Li, Tsang, & Yang, 2014), greater credibility and better reliability of information (Hodge et al., 2009) and lower analyst forecast error (Dhaliwal, Radhakrishnan, Tsang, & Yang, 2012). CSR assurance, from a firm's perspective, allows the organisation to identify material issues and to design a framework to manage non-financial risk (AccountAbility, 2008a, 2008b). From the investor's perspective, assurance can also mitigate concerns that the firm is engaged in "greenwashing" and "impression management" (Brown-Liburd et al., 2012).

Cheng, Green, and Ko (2015) considered the signalling role of CSR assurance, based on signalling theory. Empirical evidence from the financial literature shows how companies aim to signal information to the market, and academic literature about CSR disclosure reveals similar findings in relation to market signalling (Cheng, et al., 2015). The reporting of environmental, social and governance (ESG) indicators sends signals about environmental and social corporate image and the reputation of the firm (Cheng, et al., 2015) Therefore, companies with higher quality disclosure have the potential to differentiate themselves from companies that produce lower quality disclosures; companies producing high-quality information will aim to signal this high quality (Clarkson, Fang, Li, & Richardson, 2013). In fact, signalling high-quality disclosures can be interpreted as an attempt to counteract potentially negative perceptions that the company has been tempted to report positive news only and to engage in greenwashing.

Indeed, high-quality disclosures promote information credibility and confidence (Clarkson, et al., 2013). Furthermore, Mock, Strohm, and Swartz (2007) argued that in the absence of assurance, CSR reporting acts as an advertisement for the company, but does not constitute any signals about the firm's future value. Therefore, CSR assurance is needed to guarantee higher quality disclosure. Clearly, assurance plays an important role in improving

the quality of CSR disclosures (Moroney, Windsor, & Aw, 2012). In support of this view, Cheng et al. (2015) argued that although CSR assurance is voluntary, it sends signals about the reported information's importance. Furthermore, Brown-Liburd et al. (2012) found evidence that assurance effects on CSR disclosure are associated with higher share price assessments by investors, which suggests that the assurance signal is captured by changes in the company's share price.

The mounting evidence suggests that assurance seems to add an incremental value to CSR disclosure and could affect the overall value of the firm. Simnett, Vanstraelen, and Chua (2009) proposed that assurance is value-relevant; they also argued that since assurance is voluntary, it is expected that firms choosing to get their CSR reports assured are likely to believe that the benefits of obtaining assurance exceed the costs. Those benefits include increasing stakeholders' confidence in the quality of the information provided, as well as increasing trust in the firm's commitment to sustainable practices (Simnett et al., 2009).

However, the incremental value from assurance on CSR disclosure has been questioned and assurance is not seen as an independent inquiry (Ball et al., 2000; Hodge et al., 2009; O'Dwyer & Owen, 2005; Pinsker & Wheeler, 2009), because it is normally conducted under rigid restrictions imposed on the assurance provider by the firm's management (Ball et al., 2000; O'Dwyer & Owen, 2005; Pinsker & Wheeler, 2009). Therefore, an assurance engagement conducted under these conditions is unlikely to add value.

CSR assurance practice is also criticised because of the wide variability in format and content. This variability hinders the value of assurance to enhance disclosure credibility, and it suggests the need for standardisation of assurance practices and guidelines (Hodge et al., 2009). The issues of independence and the variability in content and format emphasise the need to investigate the quality of assurance statements, as well as the effect of CSR assurance quality on firm value.

Overall, CSR disclosures appear to be value-relevant and complementary to the financial performance of firms. Furthermore, CSR assurance enhances the credibility of CSR information and amplifies the benefits of CSR reporting, thereby enhancing firm value. The need for credibility and confidence in CSR information is the driver of value in this study. The terms "sustainability report", "CSR report" and "social and environmental report" are used interchangeably in this dissertation. In addition, the term "assurance" refers to assurance on CSR or sustainability disclosures.

1.2 Definition of CSR Assurance

Although sustainability reporting and assurance on sustainability are generally considered to lack specific guidance, there are two set of standards that appear to be used globally, which are: 1) the *Accountability Assurance Standards* (*AA1000 AS*), which are specifically designed to meet the needs of the providers of sustainability and CSR reports, which are normally used in conjunction with *Accountability Principles Standard (AA1000 APS)* (AccountAbility, 2008a, 2008b) ; and 2) the *International Standards on Assurance Engagements* (*ISAE3000*), which cover "Assurance Engagements Other than Audits or Reviews of Historical financial Information". According to AccountAbility (2008b), assurance can be defined as

> the methods and processes employed by an assurance provider to evaluate an organisation's public disclosures about its performance as well as underlying systems, data and processes against suitable criteria and standards in order to increase the credibility of public disclosure. Assurance includes the communication of the results of the assurance process in an assurance statement. (p. 23)

The *AA1000 AS* differentiates between assurance and assurance engagement, whereas the *ISAE3000* standards provide a definition for assurance engagement only. Below are the definitions for assurance engagement from each standard.

The *AA1000 AS* define assurance engagement as

> an engagement in which an assurance provider evaluates and expresses a conclusion on an organisation's public disclosure about its performance as well as underlying systems, data and processes against suitable criteria and standards in order to increase the credibility of the information for the intended audience. (AccountAbility, 2008b, p.23)

The *ISAE3000* defines the assurance engagement as

> an engagement in which a practitioner aims to obtain sufficient appropriate evidence in order to express a conclusion designed to enhance the degree of confidence of the intended users other than the responsible party about the subject matter information (that is, the outcome of the measurement or evaluation of an underlying subject matter against criteria). (International Auditing and Assurance Standards Board. [IAASB], 2013, p. 7)

Both definitions draw attention to the ultimate goal of CSR assurance. The main objectives of CSR assurance are to increase the credibility of public disclosure (AccountAbility, 2008b) and to enhance the confidence levels of intended report users (IAASB, 2013). Both standards agree that assurance is a process that involves methods and procedures to assess the company's disclosure against some criteria in order to provide evidence and to reach a conclusion that improves the confidence and credibility of the subject matter. These definitions confirm that assurance has emerged as a process to reduce the credibility gap, which has been created by a general lack of confidence in CSR disclosures.

There are two levels of assurance under each set of standards. Under the *ISAE3000*, the two levels of assurance are limited and reasonable. Under the *AA1000 AS*, assurance is classified as either moderate or high. In this dissertation, the term "limited" refers to limited and moderate levels of assurance, and the term "reasonable" refers to reasonable and high levels of assurance. Both of the *ISAE 3000* and the *AA1000 AS* distinguish between reasonable (high) and limited (moderate) according to the level of risk associated with the assurance. The levels of risk and error are lower in the reasonable (high) level of assurance category, leading to higher levels of confidence in the CSR disclosure itself (AccountAbility, 2008b; IAASB, 2013).

1.3 The Motivations and Hypotheses

Prior literature has considered CSR assurance as a tool for improving voluntary disclosure quality and for providing stakeholders and investors with confidence in the social and environmental information disclosed on company websites, in annual reports or in separate sustainability reports (Hodge et al., 2009; Manetti & Becatti, 2009; Simnett et al., 2009). In other words, assurance can serve as a means of reducing the credibility gap between the firm and various stakeholders (Hodge et al., 2009; Manetti & Becatti, 2009). Investors' confidence drives their investment decisions (Daniel, Hirshleifer, & Subrahmanyam, 1998). The managers of firms are aware of the importance of investors' confidence in their firms' performance. Investors as outsiders can only obtain information about the firm's performance through publicly disclosed information in reports and on websites. Investors understand management's incentives to disclose favourable information to boost their image, thereby attracting more investors. As investors understand the firm's motivation to disclose biased information, they consequently demand assurance that the information disclosed is credible. The result of increasing investor confidence in the company's performance is expected to be translated into higher demand for the company's shares (Daniel et al., 1998), thus achieving higher firm value.

From the literature reviewed above, it can be inferred that CSR disclosure quality affects firm value. Assurance enhances disclosure quality and credibility, and affects investors' perceptions. Due to the role that CSR assurance plays in improving disclosure quality, it is resaonanble to assume that assurance enhances firm value.

This dissertation aimed to test five hypotheses. The first hypothesis was that CSR assurance increases firm value. Since assurance is voluntary, unregulated and is not standardised, the firm seeking assurance can choose the type of assurance provider and the level of assurance; in this scenario, both the assurance provider and the level of assurance can be expected to affect firm value. Both the provider and the level of assurance were

therefore expected to add incremental value to the firm. In fact, the acts of choosing the level of assurance and the provider were considered to be factors that influenced assurance statement quality. Also, an overall assurance quality score was developed from this line of argument, and was used in the current research to question whether assurance quality can add incremental value to the firm's overall value.

This research tested four other supplementary hypotheses, which extended from the first main hypothesis. These four supplementary hypotheses assumed that firm value was likely to increase in four scenarios: 1) when overall assurance quality was higher; 2) when the level of assurance provided was reasonable rather than limited; 3) when the assurance provider was an accountant; and 4) when the assurance provider was from one of the 'Big Four' accounting firms.

1.4 Methodology and Sampling

The current study employed a content analysis methodology to obtain a quality score for assurance and to collect/collate information about the level of assurance and the assurance provider. A detailed content analysis was conducted following Perego and Kolk's (2012) methodology. Supplementary criteria were added to the score in an attempt to account for additional aspects of quality that were not considered by Perego and Kolk (2012). The sample represented the 150 largest companies in New Zealand and Australia. Of these, 110 reported on CSR, but only 36 companies provided assurance. Assurance statements were hand-collected and analysed to obtain the elements needed for content analysis. Financial data and social and environmental performance measures were obtained from Bloomberg database.

In the current study, two models were developed. The first was inspired by the regression model developed by Cahan, De Villiers, Jeter, Naiker, and Van Staden (2015) to measure the effect of CSR assurance on firm value. The model used in this study differed from

Cahan et al.'s (2015) original model, because it used market capitalisation as a measure of firm value. In contrast, Cahan et al. (2015) used Tobin's *Q* ratio. In the current endeavour, market capitalisation was considered to be a measure of firm value, because the aim of this study was to capture changes in share prices that resulted from a CSR assurance signal. Therefore, market capitalisation was a better measure for direct changes in the share price of a firm, as compared to Tobin's *Q* ratio. Furthermore, Cahan et al. (2015) did not include the effect of CSR assurance in their model; rather, they measured the CSR disclosure effect on Tobin's *Q*. The second model was adapted from to Zorio, García‐Benau, and Sierra (2013) to account for the determinants of CSR assurance quality. The model used in this study, included the level of assurance , as a determinant of assurance quality , which was not included in the original model developed by Zorio et al., 2013.

1.5 Contributions and Main Findings

To add meaningful empirical evidence to the debate about the economic consequences of voluntary CSR assurance, this research investigated the effect of CSR assurance on firm value. This study therefore contributes to understanding the economic benefits of assurance by investigating the incremental value added to firms' value. Finally, the present study examined the quality of assurance statements in Australia and New Zealand, a question that has rarely been examined. This research also explored the value relevance of CSR assurance statements' quality. In addition, the research adapted the content criteria of the content analysis approach proposed by Perego & Kolk, 2012 to refelect the most recent sets of assurance standars (*ISAE3000 (2013) and AA1000 AS (2008)).* The research also took governance in consideration as a factor that may affect the quality of CSR assurance.

In the current study, firm value was measured by market capitalisation. This measure was used because the aim was to examine market participants' and investors' reactions, which

are based on their perceptions of CSR assurance. Results suggested that assurance increased firm value in the selected sample, even after controlling for social and environmental performance and country and industry effects. The quality of CSR assurance did not seem to be important for the New Zealand and Australian companies included in the sample, and the level of assurance did not seem to contribute to overall firm value. Accountants appeared to be a significant determinant of CSR assurance quality, but their use as assurance providers did not affect firm value.

1.6 Structure of the Dissertation

The next chapter (Chapter Two) provides an overview of the literature available on assurance-related topics, followed by an introduction to the theoretical background for the current research and finally, hypotheses development, which is explored in Chapter Three. Chapter Four explains the research methods and the models used in this study. Chapter Five discusses results from the testing of the hypotheses. The final chapter (Chapter Six) provides a conclusion and suggests implications for current CSR assurance practices. Avenues for future research are also explored in the final chapter.

Chapter Two: Literature Review

2.1 Credibility and Corporate Social Responsibility

Sustainability and corporate social responsibility (CSR) reporting has become increasingly popular for many larger firms in New Zealand and Australia. The adoption of sustainability initiatives and CSR reporting seems to be motivated by the interest to communicate sustainable practices of the reporting organisation to the wider business community. Varying levels of disclosure have been adopted, and they range from simple narrative paragraphs in annual reports to fully dedicated, stand-alone reports (Hodge et al., 2009). Sustainability reports come in various formats and with differing content, because they are voluntary and unregulated (Hodge et al., 2009; Simnett et al., 2009; Zorio et al., 2013).

Sustainability reporting is a trend that is accompanied by public distrust (Hodge et al., 2009), because stakeholders tend to view CSR reporting as a tool for portraying a positive image of the firm (Cheng et al., 2015; Clarkson, Li, Richardson, & Vasvari, 2011; Deegan, 2002; Lyon & Maxwell, 2011; Mahoney, Thorne, Cecil, & LaGore, 2013; Merkl-Davies & Brennan, 2007). Deegan (2002) alerted investors to the likelihood that management selectively discloses positive CSR information in order to build a positive corporate image. Adams and Evans (2004) warned that company-commissioned report writers attempt to boost corporate images, because it is more important for managers to maintain a good company profile than it is to foster accountability. The concerns about firms engaging in greenwashing (Brown-Liburd et al., 2012; Lyon & Maxwell, 2011) and impression management have affected the credibility of CSR reports (Brown-Liburd et al., 2012). Therefore, assurance on CSR reports has emerged as a way to improve CSR report quality and credibility.

2.2 Assurance and its Challenges

Assurance has emerged as a corporate tool to combat CSR credibility concerns. Nevertheless, assurance itself is voluntary and unregulated, and as an industry, it is faced by two main challenges. The first challenge is that there are no generally accepted criteria for CSR reporting, which results in great variation in report content and structure. Consequently, assurance statements also vary in their content and structure (Hodge et al., 2009; Mock et al., 2007; O'Dwyer & Owen, 2005). The second challenge is the lack of specific guidance on CSR assurance, which has resulted in differences in the scope of assurance statements that are based on different standards (Hodge et al., 2009).

These challenges have contributed to increased variability and ambiguity in corporate assurance statements (Hodge et al., 2009; Perego & Kolk, 2012). The potential lack of assurance statement quality has therefore received attention from scholars. It also appears that assurance providers' professional standing and reputation play an essential role in affecting users' confidence in CSR reports (Hodge et al., 2009), and consequently, confidence in the quality of assurance statements is similarly affected. In short, similar to CSR disclosure, assurance could be criticised for being a form of promoting false positive public images and maintaining legitimacy (O'Dwyer, Owen, & Unerman, 2011).

2.3 Assurance and Investors' Concerns

In order to understand the relevance of assurance practices to a firm's value, it is important to recognise who the stakeholders relying on CSR information to make investment decisions are. Literature on CSR disclosure and assurance identify various stakeholders who might benefit from reliable CSR information. Dhaliwal et al. (2011) found that firms initiating stand-alone CSR reports and demonstrating a positive CSR performance enjoy a lower cost of capital. This suggests that CSR disclosure is an important communication channel for investors who seek information about CSR performance. Reports that specifically portray superior CSR

performance attract institutional investors and assist analysts to achieve a lower rate of forecast errors (Dhaliwal et al., 2011; Dhaliwal et al., 2012). Furthermore, Van der Laan et al. (2008) found evidence that primary stakeholders such as investors, employees and consumers are primarily concerned with both CSR and financial performance.

Clarkson et al. (2013) claimed that CSR information is as important as financial information, and that for investors, it supersedes financial information as a communication vehicle in some cases. De Villiers and Van Staden (2010) conducted a survey among investors from Australia, the United States and the United Kingdom about shareholders' requirements for environmental disclosure. They found evidence that investors in all three countries are interested in environmental disclosure. Indeed, it seems that shareholders believe that environmental disclosure is an indication of management's accountability and that these disclosures are material to financial decision-making (De Villiers & Van Staden, 2010). The survey also indicated that shareholders require such disclosures to be audited. According to De Villiers and Van Staden (2010), 70% of the respondents in Australia believed that companies should disclose an independent audit statement detailing environmental responsibility. The Certified Public Accountants (CPA) Australia's (2009) publication, "Valuing SustainabilityRreporting: Perspectives From the International investment Community" (2009), reported that 87% of the respondents felt that assurance was essential.

Cahan et al. (2015) divided CSR disclosure into expected and unexpected portions. The unexpected portion represents incremental CSR disclosure. The authors examined proprietary information, and they observed a positive relationship between the unexpected portion of CSR disclosure and firm value, as measured by Tobin's *Q* ratio. The value relevance of CSR disclosure documented by Cahan et al. (2015) suggests that investors do pay attention to such information, and that managers ignorance of disclosure practices could potentially harm a firm's market value.

The literature presented above illustrates that CSR disclosure is value-relevant, because it reduces the cost of equity capital and increases firm value. The evidence from the literature about the demand from investors for CSR information, credibility and auditing of such information creates a need to investigate if assurance is truly value-relevant.

As the demand for CSR information increases, interested stakeholders' concerns are growing about the quality and the credibility of the information published (Simnett et al., 2009). Many recent experimental design studies examined investors' perceptions and confidence in CSR disclosure and assurance, and some analysed the investors' price evaluation accordingly (e.g. Brown-Liburd et al., 2012; Cheng et al., 2015; Peters & Romi, 2015; Pinsker & Wheeler, 2009). Hodge et al. (2009) studied the perceptions of those they referred to as "report users" (p. 178), which appeared to be a generic term. However, they used Master of Business Administration (MBA) students as a proxy for report users, which is an accepted method often used in the accounting and auditing literature to represent non-professional investors (Hodge et al., 2009). In addition, Pinsker and Wheeler (2009) aimed to understand the effects of independent assurance on the perceptions of investors with limited business knowledge (LBK). Pflugrath, Roebuck, and Simnett (2011) extended the investigation to include the perceptions of financial analysts.

The experimental design studies (Hodge et al., 2009; Pflugrath et al. (2011); Pinsker & Wheeler, 2009) discussed in this section have indicated that a wide range of investors, financial analysts, professional and non-professional investors rely on CSR information to make investment decisions. This body of evidence further indicates that assurance is viewed as an indicator of credibility and reliability, and that it is likely to affect investors' and analysts' judgement. Hence, it is valid to assume that a corporation or company can benefit from implementing assurance regimes, and this assumption prompts the investigation of the associations between assurance and firm value.

2.4 Investors' Perceptions and Confidence

The market for providing assurance services is competitive, and specialists from outside the accounting field can provide assurance for CSR reports (Pflugrath et al., 2011; Simnett et al., 2009). This has led many researchers to question if the perceived quality of the reports varies with the profession and the expertise of the assurance provider (Hodge et al., 2009; Pflugrath et al., 2011; Simnett et al., 2009). Pflugrath et al. (2011) found that users perceived information assured by accountants to be of a higher standard. However, Hodge et al. (2009) found that CSR reports were perceived to be of a higher quality if assured by an accountant, and only when the level of assurance was reasonable, but not when it was limited. Indeed, when the assurance level is limited, credibility perceptions are not affected by the profession of the assurance provider (Hodge et al., 2009). Overall, the results suggest that information assured by accountants is considered to be more credible (Hodge et al., 2009; Pflugrath et al., 2011), despite the argument that environmental consultants may have higher levels of expertise and may understand social and environmental issues better (Simnett et al., 2009).

The independence of assurance practitioners and the credibility the company management are often questioned and challenged by assurance and sustainability researchers. For example, Ball et al. (2000) argued that assurance reports are typically prepared at the request of management, and that the process is often restricted and constrained to meet management needs. Pinsker and Wheeler (2009) conducted an experiment in response to concerns about management's credibility and the tendency to introduce favourable bias to non-financial information. This bias supposedly increases uncertainty and doubt about the firm, and affects the willingness of investors to invest more funds (Pinsker & Wheeler, 2009). In an attempt to understand the effects of independent assurance on the perceptions of LBK investors, Pinsker and Wheeler (2009) asked participants to evaluate the price of a fictitious

firm. The results indicated that LBK investors provide higher price evaluations when the information was assured, and do so no matter whether the disclosure is positive, negative or mixed. In addition, the increase in stock price seems to be greater when a series of quality-assured, positive information releases are made; this is because there is a greater need to emphasise the credibility of management via assurance, because investors believe that positive news is more likely to be more biased (Pinsker & Wheeler, 2009).

Assurance can also mitigate investors' concerns about the possibility that a corporation is engaged in impression management and greenwashing (Lyon & Maxwell, 2011). Coram, Monroe, and Woodliff (2009) demonstrated that assurance only improves sophisticated financial report users' price assessments when non-financial performance information is positive. Brown-Liburd et al. (2012) agreed with Coram et al. (2009), and extended their reasoning to test for the effect of including a company's CSR investment in the analysis. Such investments are socially and environmentally responsible investments by the firm. When CSR disclosure was positive in their sample, Brown-Liburd et al. (2012) found no evidence that assurance affected investors' price judgement positively. Instead, they found that assurance had an impact only when the firm's CSR investment was high relative to other firms in the same industry. The Brown-Liburd et al. (2012) results can be explained by attribution theory, in that incentive-consistent positive disclosure (disclosing higher CSR investment) has a greater effect on stock price assessments when assurance exists. Indeed, doubts and concerns of report users do seem to increase when disclosures look favourable. Thus, assurance plays an important role in alleviating investors' concerns and can affect an investor's price estimation substantially.

Overall, experimental studies currently available in the business literature pool provide evidence that CSR assurance affects the perception of different report users, such as professional investors, non-professional investors, financial analysts and investors with LBK

(Brown-Liburd et al., 2012; Coram et al., 2009; Hodge et al., 2009 Pflugrath et al., 2011; Pinsker & Wheeler, 2009). Assurance level and assurance provider profession are also contributing factors to investors' level of confidence, and consequently, these factors affect share price judgements. Furthermore, the studies illustrated in this section have indicated the possibility of including CSR assurance in investors' decision-making processes (Brown-Liburd et al., 2012; Coram et al., 2009; Hodge et al., 2009 Pflugrath et al., 2011; Pinsker & Wheeler, 2009), which suggests that credibility of information disclosed by firms affects demand for companies' shares; this relationship could potentially increase the firm's overall value on the stock market.

2.5 Accountants as Preferred Providers

The market for assurance is competitive. Companies have a choice of various assurance providers. According to Perego and Kolk (2012), assurance providers can be classified into four categories: 1) accounting firms, 2) specialists and consultants, 3) certification bodies and 4) others. "Others" includes academic institutions, non-governmental organisations, stakeholder panels and individual auditors. The most common types include: 1) accountants, 2) specialists and consultants. (Hodge et al., 2009; Moroney et al., 2012; Simnett et al., 2009). Although Ball et al. (2000) found that consultant assurors dominate the industry, O'Dwyer and Owen (2005) found that accountants seem to have the greatest presence in assuring environmental reporting, whereas consultants appear to dominate the social/sustainability reporting field.

Some studies could be considered outdated now in such a fast-paced business environment, and more recent literature has revealed that preference for type of assurance provider varies between countries and seems to be affected by a country's internal regulations. For example, Simnett et al. (2009) found that, at the time of their study, corporations domiciled

in countries that were more stakeholder-oriented, preferred accountants; in contrast, Kolk and Perego (2010) found that companies domiciled in countries that were more shareholder-oriented (and therefore had lower levels of litigation), tended to choose a large accounting firm as their assurance provider. In addition, the role of accountants as assurance providers seems to be less dominant as alternative assurance providers increase in number and become more diverse (Kolk & Perego, 2010). Indeed, according to a more recent report by Perego and Kolk (2012), accountants are the leading assurance providers, but they are only slightly ahead of certification bodies.

The choice of assurance of provider may therefore depend on another factor, perhaps the assurance provider's experience and competence. There are significant variations in information provided about experience and competencies, however. Both accountants and environmental specialists (consultants) make reference to their past assurance experience; however, there is a tendency for accountants from the Big Four accounting firms to rely on the name of their firm to demonstrate competence (Perego & Kolk, 2012). Non-Big Four accountants benefit from providing a detailed description of their competences, in contrast, and they also benefit from making detailed reference to the steps taken in conducting assurance procedures (Fuhrmann, Ott, Looks, & Günther, 2013). This body of evidence shows that assurance providers realise the potential effect they may have on investors' perception of quality. They realise that it is perceived quality that matters, and not the actual quality (Karjalainen, 2011). Non-Big Four accountants and environmental specialists (consultants) who do not enjoy as big a reputation as the Big Four firms, because they are relatively new to the market, need to demonstrate their competence by explaining their relevant knowledge and skills (Fuhrmann et al., 2013; Karjalainen, 2011).

2.6 Global Trends in CSR Assurance

According to the *Klynveld Peat Marwick Goerdeler (KPMG) Corporate Responsibility Survey* (2013b), 93% of the world's largest corporations (the Global Fortune G250) report on sustainability. Assurance, however, seem to be lagging behind, with only 59% of those who report on CSR actually adopting assurance globally (KPMG, 2013b). In New Zealand, 47% of the N100[1] companies report on sustainability; however, only 17% prepare local, New Zealand-specific sustainability reports. The other 30% produce CSR reports as part of their international CSR reporting groups (KPMG, 2013c).

Unlike New Zealand, which seems to be lagging behind the global trend in sustainability reporting and assurance, Australian CSR and assurance figures seem to be consistent with global trends. In 2013, 82% of the largest 100 Australian companies produced CSR reports, which represents a dramatic rise compared to 57% in 2011 (KPMG, 2013a).

A total of 54% of international companies that reported on CSR in 2013 sought external assurance on their reports, with major accounting firms being the most popular choice as assurance providers (57%) (KPMG, 2013b). The KPMG New Zealand supplement did not report any figure for assurance in New Zealand, although it stated that the survey covered CSR reporting and the extent of assurance (KPMG, 2013c).

Although KPMG does not release a CSR survey on a regular basis, the firm does produce a survey every few years to highlight the most recent global trends in sustainability reporting, including assurance. There are also country-specific versions of the report, as mentioned in the paragraph above, such as the Australian and New Zealand supplements (KPMG, 2013a; KPMG, 2013c). In addition to the KPMG CSR surveys, searches of academic literature yielded various studies that were conducted on an international scale to present

[1] N100 refer to the largest 100 companies in New Zealand by the sales' size.

assurance global trends and issues (e.g Clarkson, Li, Richardson, & Tsang, 2015; Kolk & Perego, 2010; Mock et al., 2007; Perego & Kolk, 2012; Simnett et al., 2009).

Mock et al. (2007) examined 130 entities to identify the countries and the industries that produced assured sustainability reports between 2002 and 2004. Their descriptive results indicated that European firms, particularly firms from the UK, were the leaders in this arena at the time the report was released. Australian firms provided 18% of the assurance reports, and Australia was considered a leader in CSR reporting and assurance at the time of the study (Mock et al, 2007). The Mock et al. (2007) sample did not include New Zealand. However, the researchers found that firms operating in economically and environmentally sensitive industries such as utilities, mining and oil, were the sectors producing the highest percentage of assured reports, and that 65% of the reports were produced by non-Big Four firms.

The Simnett et al. (2009) study was one of the largest international assurance studies conducted. The study examined 2,113 companies from 31 countries that produced sustainability reports between the years 2002 and 2004 (Simnett et al., 2009). Their findings revealed that firms seeking to enhance credibility were likely to have their reports assured, but that the choice of the assurer was of less importance; indeed, companies domiciled in stakeholder-oriented economies were more likely to get their reports assured by the auditing profession (Simnett et al., 2009). In addition, industrial companies were in greater need of assurance, and were therefore the ones that seemed to adopt it readily (Simnett et al., 2009).

A smaller scale international study conducted by Kolk and Perego (2010) included 212 of the G250 companies for the years 1999, 2002 and 2005; the sample represented companies in 20 countries. The Kolk and Perego (2010) study explored factors contributing to decisions to adopt voluntary assurance. The results indicated that companies operating in stakeholder-oriented countries with weaker governance enforcements were more likely to adopt assurance (Kolk & Perego, 2010). The demand for assurance was also higher when market and

institutional mechanisms freely determined corporations' sustainable practices (Kolk & Perego, 2010). The authors also found that companies domiciled in countries that were more shareholder-oriented and had a lower level of litigation tended to choose large accounting firms as their assurance providers (Kolk & Perego, 2010). This finding contradicts the findings of Simnett et al. (2009), who noted that stakeholder-oriented countries were more likely to choose assurance providers from the auditing profession.

Perego and Kolk (2012) conducted another international study focusing on multinational corporations (MNCs) in 21 countries. The study employed a content analysis methodology to assess the quality of assurance statements and was explorative, in that results were descriptive: Surprisingly, the authors found that accountants provided lower quality assurance statements when compared to other assurance providers and also tended to employ a more cautious approach, providing concise conclusions and a limited level of assurance (Perego & Kolk, 2012).

Clarkson et al. (2015) used an international sample of 26 countries to examine if firms that were committed to better CSR performance were more likely to 1) produce stand-alone CSR reports, 2) adopt assurance, and/or 3) choose accountants to provide assurance services. They found evidence that commitment to CSR performance was positively linked to producing a stand-alone report and to adopting assurance (Clarkson et al., 2015). No evidence was found to support the hypothesis that CSR-committed firms chose accounting firms as their preferred providers (Clarkson et al., 2015). The authors did find evidence, however, that assurance had an effect on inclusion in the Dow Jones Sustainability Index (DJSI) and on socially responsible investors' (SRIs') investment decisions (after controlling for the firms' CSR performance) (Clarkson et al., 2015).

The international studies summarised in this section provide a synopsis of some CSR assurance trends observed in the international arena. The existence of international studies on CSR assurance provides evidence that this arena is a promising area of future research.

2.7 Higher Quality Disclosure and Firm Value

Empirical research using proprietary data examines the value added by assurance to CSR disclosure quality. Research that examines the effect of assurance on disclosure quality builds on preliminary research that examines the associations between disclosure, disclosure quality and firm value. Dhaliwal et al. (2011) found that firms experiencing a higher cost of equity in the previous year were likely to produce stand-alone CSR reports in the subsequent year. This argument for voluntary CSR disclosure suggests that firms embroiled in financial struggles need to maintain legitimacy and will seek to disclose CSR information (De Villiers & Van Staden, 2011; Dhaliwal et al., 2011; O'Dwyer et al., 2011). Consequently, CSR disclosure should reduce the cost of equity capital in the subsequent year (Dhaliwal et al., 2011). Thus, Dhaliwal et al. (2011) provided evidence that CSR disclosure can affect firm value by showing that CSR disclosure reduces future cost of equity capital.

Accuracy and higher quality disclosures can reduce the volatility of cash flows and can also reduce covariance with other firms' cash flows. This results in lower betas for the disclosing firms and reduces the cost of equity capital (Hughes, Liu, & Liu, 2007; Lambert, Leuz, & Verrecchia, 2007). In addition, disclosure reduces information asymmetry between investors and managers, and among investors (Dhaliwal et al, 2011). Although Dhaliwal et al. (2011) did not provide any evidence supporting the need for assurance, it appears from the discussion above that accurate and high-quality disclosures are required to reduce information asymmetry and to enable investors to rely on CSR information as an investment tool. The result of information asymmetry reduction is higher investor trust and confidence, which

positively affects cash flow volatility and could result in financial benefits, including reducing the cost of equity capital. Thus, the need for accurate and reliable disclosure could be met by providing independent assurance.

Dhaliwal et al. (2011) also found that first-time assurance initiation reduced analysts' forecast errors. Indeed, CSR information improved analysts' forecast accuracy, particularly for firms domiciled in stakeholder-oriented countries (Dhaliwal et al., 2012). In particular, it seems that when financial disclosure is opaque, CSR disclosure improves analysts' forecast accuracy (Dhaliwal et al., 2012). Dhaliwal et al. (2014) thus extended their initial enquiry, and provided further financial evidence that CSR information reduces the cost of capital in firms operating in stakeholder-oriented countries and in companies with opaque financial disclosure statements. Clearly, CSR information complements financial information and is value-relevant.

In the environmental reporting arena, Clarkson et al. (2008) have developed an index for environmental disclosure. The index includes independent verification (assurance) as one of the hard disclosure components (Clarkson et al., 2008). Hard disclosure components are index indicators that a firm with poor environmental performance cannot easily imitate; in fact, if a company attempts to mislead stakeholders, it may run the risk of facing litigation (Clarkson et al., 2008).

Clarkson et al. (2011) and Clarkson et al. (2013) used the same index for environmental disclosure. Clarkson et al. (2011) claimed that firms with improved environmental performance experienced significant enhancement in financial performance in subsequent periods. Clarkson et al. (2013) extended the research group's previous efforts and examined the association between environmental disclosure and firm value. Clarkson et al. (2013) argued that transparent voluntary environmental disclosures increased firm value, as long as they were perceived to be credible by investors; furthermore, disclosures conveyed incremental

information about the firm's environmental performance, its competitiveness and future environmental strategy. Such disclosures also lowered the firm's cost of capital, as a consequence of reducing information asymmetry (Clarkson et al., 2013). Plumlee et al. (2015) provided further evidence that environmental disclosure quality is associated with firm value. This research group constructed their own voluntary disclosure index, consistent with the reporting guidelines known as *Global Reporting Initiative* (*GRI*) in a similar fashion to Clarkson's et al. (2008), and included assurance. Hence, it can be claimed that Clarkson et al. (2008), Clarkson et al. (2011), Clarkson et al. (2013), Plumlee et al. (2015) have examined the effect of assurance implicitly, but assurance was not the focus of those studies

The need for assurance often stems from the need to mitigate information asymmetry, and it is therefore perceived as an effective control tool (Blackwell et al., 1998; Carey, Simnett, & Tanewski, 2000). Assurance is also a signal for credibility that influences investors' perceptions, as clearly shown by many studies (Clarkson et al., 2013; Clarkson et al., 2008; Clarkson et al., 2011; Dhaliwal et al., 2011). These studies and additional research conducted by Plumlee et al. (2015) stressed the importance of reliability and quality of CSR disclosure and linked these attributes to financial performance and ultimately, to firm value.

Moroney et al. (2012) provided stronger support for the current research objectives. Moroney et al. (2012) drew attention to the role of assurance in improving disclosure quality. The index used by Moroney et al. (2012) was derived from a prototype index developed by Clarkson et al. (2008). Both studies (Moroney et al., 2012; Clarkson et al., 2013). relied on including independent assurance in the index. However, Moroney et al. (2012) included assurance as an explicit independent variable in the quality disclosure index model, employed to determine the effect of assurance on disclosure quality. This was because the Moroney et al. (2012) were specifically interested in the effect of assurance on disclosure quality, and does not employ the disclosure quality index to test for value relevance, as in Clarkson et al (2013),

and Plumlee et al. (2015). Moroney et al., (2012) sampled the top 500 public companies listed on the Australian Stock Exchange (ASX) to investigate the effect of independent assurance on environmental disclosure quality (Moroney et al., 2012). Their results indicated that the quality of environmental disclosures was significantly greater when assured, but no significant difference was found between the assurance provided by accountants/auditors versus consultants (Moroney et al., 2012).

This result was interesting, because other researchers have found empirical evidence that reports assured by members of the auditing profession are (supposed to be) of higher quality (e.g Hodge et al., 2009; Zorio et al., 2013). This contradiction lies in the fact that the auditing profession has well-developed standards and quality control mechanisms (Pinsker & Wheeler, 2009; Simnett et al., 2009). Furthermore, members from the auditing profession are perceived to be ethical and independent, which makes them trusted and reliable (Simnett et al., 2009). Although the type of assurance provider does not seem to influence environmental disclosure quality, the assurance provider's level of experience appears to enhance disclosure quality (Moroney et al., 2012).

Overall, it appears that disclosure quality increases firm value (Clarkson et al., 2013; Plumlee et al., 2015), and it seems that assurance improves environmental disclosure quality (Moroney et al., 2012). Hence, it can be inferred that assurance plays an important role in improving CSR disclosure quality and that a company's value is likely to increase as a result.

2.8 Assurance Content and Quality

A review of the literature reveals that the content and quality of CSR assurance statements has received much attention from researchers (Ball et al., 2000; Fuhrmann et al., 2013; O'Dwyer & Owen, 2005; Perego & Kolk, 2012; Zorio et al., 2013). Despite obvious variability in content and structure, researchers appear to analyse the content of assurance

statements based on standards that are widely used for assurance, such as the *ISAE3000*, the *AA1000 AS* and the *GRI*. O'Dwyer and Owen (2005) presented a critical evaluation of CSR assurance statements, which was one of the earliest attempts to evaluate the content of assurance statements. They developed a framework to define minimum requirements for achieving high-quality assurance to enhance credibility, comparability and stakeholder responsiveness. Those requirements were derived from the *AA1000 AS*, the *GRI* and the Fédération des Experts Comptables Européens *FEE*. Despite their significant contribution to the literature, their analysis was mainly descriptive.

Perego and Kolk (2012) focused on the effect of existing standards' diversity and the variety found amongst assurance providers. The study extended the analysis of O'Dwyer and Owen (2005), but in addition, they developed a quantitative quality score to analyse the content (Perego & Kolk, 2012).

Zorio et al. (2013), on the other hand, conducted an empirical quantitative analysis of assurance statements quality by developing a quality index derived from the content elements specified in the *AA1000 AS* and *ISAE3000* assurance standards. Zorio et al. (2013) studied a sample of 161 CSR assurance reports, and found evidence that CSR assurance was of an acceptable quality according to the newly developed quantitative quality index. Their study examined factors that influenced company's decisions to publish, to assure the reports and to hire assurance services from auditors or consultants; they also examined the subsequent quality of the assurance statements (Zorio et al. 2013). Results indicated that assurance statement quality is dependent on meeting the content elements specified in the voluntary assurance standards, including: 1) the level of assurance provided; 2) the profession of the assurance provider; 3) the standards applied; 4) the description of the assurance engagement procedures; 5) the tenor of the recommendations; and 6) an independence statement compliant with the International Federation of Accountants (IFAC)'s independence standards (Zorio et al., 2013).

These content elements were critically evaluated by O'Dwyer and Owen (2005) as well. They found assurance to be of a higher quality when performed by an auditor (O'Dwyer & Owen, 2005). Fuhrmann et al. (2013) utilised a similar thematic content analysis to identify the most relevant content elements of assurance that have the potential to reduce information asymmetry.

Prior literature has established that companies utilise assurance to enhance the credibility of non-financial disclosures and to build their reputation (Simnett et al., 2009). The current research contributes to the literature by exploring how assurance and the quality of assurance reports can increase firm value. Firm value is expected to be affected by the perceived reliability of financial reports and hence, by the quality of auditing/assurance (Simunic, 1984). Consistent with Simunic's (1984) view, the present study aims to examine the effect of CSR assurance on the quality of disclosure and the subsequent effect on firm value. It also examines the effect of assurance quality on company value.

2.9 CSR Assurance and Financial Performance

The literature provides little evidence on the effect of CSR assurance on financial aspects of the firm based on analyses of propriety data, but recent literature suggests that there is an increasing trend to investigate the benefits of CSR assurance on the firm in financial terms (Casey & Grenier, 2015; Fuhrmann et al., 2013). Casey and Grenier (2015) investigated the effect of assurance on US initiating firms. Their study provided evidence that assurance significantly reduces the future cost of equity capital and results in lower analyst forecast errors and dispersion. Assurance provided by accountants amplifies the financial benefits of assurance (Casey & Grenier, 2015). Fuhrmann et al. (2013) proposed that assurance reduces information asymmetry, and used bid–ask spread of the share price as a measure of information asymmetry. However, Fuhrmann et al. (2013) found that the assurance signal is not sufficient

to alleviate information asymmetry, and that only certain characteristics of assurance, such as a high level of assurance and a larger scope, reduce risk and improve the perceived quality of the assurance statement.

Indeed, Fuhrmann et al. (2013) view on the risk reduction ability of high level of assurance is consistent with the purpose of high level of assurance as per *AA1000 AS (2008)*. A high level of assurance provides an assurance conclusion that promises lower level of risk and error (AccountAbility, 2008b)

2.10 Assurance Independence and Corporate Governance

The definition of independence varies widely, and is often considered as ambiguous (Chan & Li, 2008; Simunic, 1984). An independent assurance in the current research refers to external assurance provided by an expert in the field who does not primarily work for the company commissioning the assurance service. Independence ensures objective assessment of the company's disclosure (Chan & Li, 2008). Hence, it can be expected that independence of assurance increases the reliability of the information disclosed and positively affects confidence in the firm, which is likely to be captured as an increase in assurance quality; in turn, the increase in assurance quality is likely to be reflected by a rise in firm value.

Prior literature suggests that stronger corporate governance is associated with a strong demand for assurance services and strong audit outcomes (Carcello, Hermanson, & Ye, 2011). Therefore, independence is a form of corporate governance that is crucial in a firm's quest for reliability. Nevertheless, O'Dwyer and Owen (2005) questioned the independence of assurance practices. O'Dwyer and Owen (2005) and Pinsker and Wheeler(2009) drew attention to the issue that corporate governance may be compromised in most situations in the assurance engagement process, as assurance providers are often commissioned by the management, who

often impose restrictions on the assurance providers, such as choosing the scope and deciding on the content of the report, which in turn, compromises independence.

Kolk and Perego (2010) agreed that independence was difficult to achieve, and raised additional concerns about the independence of the assurance process itself. They documented a significant amount of direct management control over the assurance process. Furthermore, O'Dwyer and Owen (2005) argued that assurance fails to empower stakeholders and that assurance is a managerial tool often used to signal quality and accountability as a way of controlling stakeholders' perceptions. O'Dwyer and Owen (2005) claimed that assurance might not necessarily contribute towards greater accountability to stakeholders, but that it adds value to the management of a company, as it helps them to manage stakeholders. Their inquiry into the independence of assurance providers revealed that accountants often do not provide full details describing the independence of the assurance engagement, but that their statements are often labelled as an "independent" and that generally, this is deemed in the corporate world to be a sufficient indicator of independence. Consultants, however, seem to provide more details on the assurance process and do state their independence clearly (O'Dwyer & Owen, 2005; Perego & Kolk, 2012).

The accounting literature seems to focus primarily on the role of the board of directors and auditing committees in relation to financial reporting. Cohen, Krishnamoorthy, and Wright (2008) and Carcello et al. (2011) advocated exploring and adopting a broader set of corporate governance mechanisms. Peters and Romi (2015) posited that the growing trend of instituting environmental committees within the board of directors filled the gap that Cohen et al. (2008) and Carcello et al. (2011) highlighted in their earlier research. In fact, agency theory suggests that management presents information with greater credibility because such quality information signals greater management ability (Verrecchia, 1990). Based on this idea, it

appears that assurance can signal a management regime open to adopting proper governance mechanisms.

According to Peters and Romi (2015), CSR assurance can be thought of as an instrument of corporate governance. Peters and Romi (2015) believed that firms establish sustainability-related governance to boost their reputation and to conform to evolving CSR-related social norms. They therefore examined the effect of sustainability-oriented corporate governance mechanisms on the adoption of voluntary CSR assurance, and they found a positive association between CSR assurance and the presence of a Chief Sustainability Officer (CSO); furthermore, they found that this association tended to increase as the experience of the CSO increased (Peters & Romi, 2015). In addition, it seems that the existence of experienced directors in the environmental committee affects the decision to assure, leads to higher quality assurance and leads companies to choose professional accounting firms (Peters & Romi, 2015). In the Peters & Romi (2015) sample, however, experienced CSOs seemed to prefer experienced sustainability consultants.

It also appears from initial analyses that environmental performance is an important determinant in the decision to assure or not, as CSOs prefer to report on poor environmental performance without assurance (Peters & Romi, 2015). Although negative environmental performance may affect the firm adversely, it is unlikely to be associated with concerns about the credibility and honesty of the management, which is the reason why negative environmental performance disclosures do not need to be assured (Peters & Romi, 2015). This state of affairs could suggest that managers are aware that investors' concerns about greenwashing and impression management are lower when actual environmental performance is negative (Brown-Liburd et al., 2012), and consequently, the firm's legitimacy is not threatened.

Peters and Romi (2015) considered the implications of internal auditors as providers of assurance. In contrast, most studies considered in this literature review were only concerned

with external assurance providers (external auditors and consultants). The reason most other studies considered only external assurance lies in the fact that firms seeking assurance are expected to look for an independent, third-party opinion. However, independence may be compromised when an internal auditor provides assurance; therefore, external assurance providers are perceived to have higher levels of independence, indicating higher levels of governance, credibility and reliability (Peters & Romi, 2015).

Environmental committees and CSOs promote adoption of CSR assurance; however, if their managerial pay is tied to CSR performance, investors tend to be sceptical about the reported environmental information (Brown-Liburd & Zamora, 2015). Although performance-related pay for managers originated as a corporate governance mechanism, it seems that this governance mechanism fails to alleviate investors' concerns. Brown-Liburd and Zamora (2015) found that share price assessments are higher 1) in the presence of CSR investment, and 2) when managerial pay is tied to CSR performance, but only when assurance is provided. This suggests that assurance increases the confidence of investors when managerial pay is tied to CSR performance. However, this does not completely guarantee the independence or the impartiality of the assurance provider, because assurance is often commissioned by the board of directors or by the management team. When managers define the scope and the extent of the assurance engagement, independence ceases to hold as much meaning (Brown-Liburd & Zamora, 2015; O'Dwyer & Owen, 2005; Pinsker & Wheeler, 2009) .

In summary, the two most important studies that demonstrate the relevance of corporate governance to CSR assurance are Brown-Liburd and Zamora (2015) and Peters and Romi (2015). Peters and Romi (2015) showed the benefits of the interaction between assurance and corporate governance by explaining the role of the CSO. Brown-Liburd and Zamora (2015), on the other hand, presented evidence on how assurance can help to lessen the concerns associated with some corporate governance mechanisms, such as tying managers'

compensation to sustainability performance. Both studies demonstrated the role of assurance as a corporate governance control mechanism that the firm can use to improve its perceived credibility.

2.11 Chapter Summary

The literature review presented in this chapter sums up the importance of CSR assurance as an indicator of credibility and quality. Assurance acts as a governance mechanism and affects investors' perceptions about the credibility and the quality of CSR disclosure. Since CSR disclosures are value-relevant, it is likely that assurance amplifies the benefits of CSR disclosure and will prove to be value-relevant. These assumptions are tested in the following chapters.

Chapter Three: Theoretical Framework and Hypotheses Development

3.1 Signalling Theory and Assurance

Information asymmetry arises between those who hold information and those who could make better decisions if they had access to this information (Connelly, Certo, Ireland, & Reutzel, 2011; Hill & Jones, 1992). Information asymmetry arises between the firm's management (as insiders) and the public, potential and existing investors (as the outsiders); outsiders often have no control over operating decisions made within the firm (Connelly et al., 2011; Hill & Jones, 1992). There are two broad categories of information asymmetry: 1) information asymmetry about intentions, and 2) information asymmetry about quality (Stiglitz, 2000). Unfortunately, CSR reporting is subject to both types of information asymmetry. This is because investors as outsiders often question the intentions behind CSR and sustainability reporting because they fear firms' engagement in greenwashing (Lyon & Maxwell, 2011) and impression management (Merkl-Davies & Brennan, 2007). Doubts about management's intentions lead investors to question CSR report quality. However, even if investors trust management, the quality of the information reported may still be questionable, due to a general lack of reporting standards (Hodge et al., 2009), especially since CSR reporting is voluntary in New Zealand and Australia.

The role of assurance is to alleviate investors' concerns regarding the intentions and the quality of CSR reporting. Assurance acts as a signal of credibility and quality (Hodge et al., 2009). Managers as insiders often hold greater discretion over the information disclosed to investors and to the public. Investors realise that they are disadvantaged, and they often fear that managers may not reveal critical information about the performance of the firm (Ball et al., 2000; Morris, 1987; O'Dwyer & Owen, 2005; Pinsker & Wheeler, 2009). Investors also fear that managers may provide information that is misleading, unreliable and not credible (Connelly et al., 2011). Therefore, assurance from a third party has emerged as a way of

monitoring managers to reduce investors' concerns (Cheng et al., 2015; Merkl-Davies & Brennan, 2007).

Although the intended signal from assurance is to improve credibility and report quality, the real intention behind the signal is to maintain legitimacy with the firms' stakeholders (O'Dwyer et al., 2011) in order to attract future investments. Reduction of information asymmetry is often the result of assurance as a signal (Casey & Grenier, 2015), even if the signal has a different intended purpose. A firm that assures its reports aims to distinguish itself from other companies reporting on sustainability as a higher quality firm producing a report that represents a true reflection of the company's sustainability performance (Connelly et al., 2011). This dichotomy exists because assurance is voluntary and is costly (Simnett et al., 2009). Therefore, firms adopting assurance can distinguish themselves as higher quality firms, whether their actual quality is higher or not. This type of signal can be considered as the first signal.

The current research utilises signalling theory to focus on the role of assurance as a signal that the firm aims to convey to its stakeholders, particularly investors. This signal helps to reduce information asymmetry about reports' unobservable qualities. This is consistent with the majority of management studies that apply signalling theory to focus on the role of signalling in understanding how parties resolve information asymmetries about latent and unobservable qualities (Connelly et al., 2011). For an assurance signal to be effective, it is essential for assurance to constitute all elements of signalling theory. The signalling environment involves: 1) a *signaller*, 2) a *signal*, 3) *receivers* and 4) *feedback*. The *signaller* is an insider who is privileged to know a greater extent of information, compared to an outsider (Connelly et al., 2011). For example, the firm's managers possess a greater knowledge of company operations and performance. Management is aware of the current status of

sustainability reporting and performance. Therefore, managers aim to signal their confidence by obtaining assurance from a third party to communicate quality and credibility.

The *signal* aims to transform unobservable information into a sign that the signaller intentionally communicates to outsiders. This signal contributes to a reduction in information asymmetry between the parties involved (Connelly et al., 2011). Adopting assurance is an action by the firm that carries its main intended signal. The signals generated by adopting voluntary assurance are strategic signals, because adopting voluntary assurance is a strategic decision (Ballou, Casey, Grenier, & Heitger, 2012; Cheng et al., 2015). The aim is to assure investors that managers are confident and honest in disclosing true sustainability performance (Cheng et al., 2015). This signal also conveys that managers strive to disclose accurate information to the public and to investors.

There are also some attributes to the strategic *signal*: The *signal* must be costly and observable (Connelly et al., 2011). Assurance fees paid to the providers are often substantial, despite being significantly lower than financial auditing costs (Park & Brorson, 2005). Obtaining assurance from a third party is also time-consuming (Park & Brorson, 2005). Both the high financial costs and the time-consuming procedures are assumed to increase the difficulty of false signalling. Therefore, firms expect that the benefits from assurance will exceed the costs incurred (Simnett et al., 2009).

Conversely, one could argue that if a business is expecting that assurance benefits will exceed its costs, then managers may be tempted to falsify positive signals. Distinguishing between honest and falsified signals could therefore be difficult. Hence, the cost of the signal should be structured in a manner that dishonest signals do not benefit the signallers (Connelly et al., 2011). This means that accountants and standard-setters involved in sustainability assurance standards development should impose greater restrictions on assurance processes and on assurance providers. Only assurance statements that comply with well-recognised

assurance standards should be rewarded. Assurance statements complying with rigorous assurance standards signal quality.

The second attribute of any effective *signal* is observability. Assurance must be observable by the public; otherwise, the intended effect from assurance will not be achieved. In other words, if investors do not pay attention to CSR reports or to their credibility and quality, then the assurance signal does not meet the observability criterion. However, there is evidence that sustainability reporting is observed by investors (Clarkson et al., 2015; De Villiers & Van Staden, 2010; Kanter, 2011; Koellner, Weber, Fenchel, & Scholz, 2005), and that investors demand assurance to enhance their confidence in CSR reports (Clarkson et al., 2015; De Villiers & Van Staden, 2010). Both private and institutional investors are concerned with sustainability reporting (De Villiers & Van Staden, 2010; Kanter, 2011; Koellner et al., 2005). The emergence of sustainable investment funds and the increase in the supply of mutual funds in the green investment sector suggest that investors are paying greater attention to sustainability information when making investment decisions (Koellner et al., 2005). Koellner et al. (2005) are proponents of developing sustainability ratings to allow comparability between various investment funds in order to aid investors in making decisions. This is because investors need a third-party view to be able to trust the firm's quality and to invest in higher quality funds with confidence. Otaining a third-party opinion is an essential trust booster for investors; the current research proposes that assurance is the signal needed to achieve the confidence boost desired by investors.

The *receiver* is an outsider who lacks knowledge about the intent and the quality behind the information disclosed. This is because the outsider does not know about internal operations and actions conducted by managers on a daily basis. Thus, the receiver as an outsider seeks to receive information and credibility signs from insiders.

To initiate a signal that is effective, the signal must have a strategic effect. In other words, the signaller initiates the signal because the receiver is expected to respond to the signal in a beneficial manner (Connelly et al., 2011). Firms strategically adopt assurance and expect that the feedback from investors will be an increase in investment confidence (Ballou et al., 2012; Cheng et al., 2015; Merkl-Davies & Brennan, 2007). Consequently, this is expected to increase investor's willingness to invest in the firm. This analysis above is based on the assumption that investors are concerned with sustainability reporting credibility, and that firms are signalling their actions in a manner consistent with the public's social norms.

3.2 Signal Types

There are several signals that the firm may send by adopting CSR assurance. The first and main signal type shows that management is confident in the reported information, which is delivered with assurance. Therefore, assurance acts as a signal of CSR reporting quality. The second signal type described the quality of the assurance statement, which can be measured by applying various aspects of quality. The assurance statement's quality is often associated with assurance levels and with assurance provider type/profession (Simnett et al., 2009; Zorio et al., 2013). A reasonable level of assurance indicates greater quality, because it involves more extensive evidence-gathering procedures, compared to a limited level of assurance. A reasonable level of assurance allows investors to come to a conclusion that is based on evidence covering all organisational levels, from external and internal sources to stakeholders, and it provides a higher level of confidence plus a lower chance of error (but not necessarily a zero chance) (AccountAbility, 2008b). Due to the reputation of accountants as highly skilled professionals, assurance engagements carried out by accountants are expected to be of a higher quality (Simnett et al., 2009). The Big Four accounting firms enjoy a better reputation that

distinguishes them from other, smaller accounting and auditing firms, and their assurance statements often reflect higher quality (Ackers, 2015; Simnett et al., 2009).

Quality aspects that often appear in the literature as attributes of quality in assurance statements therefore act as signals of assurance statements' quality, provided that the signals are observable and that the details contained in assurance statements receive critical attention from investors.

3.3 Research Questions and Hypotheses Development

3.3.1 Value relevance. of CSR assurance.

Voluntary assurance can be viewed as a strategic decision that company management implements to enhance transparency and quality (Ballou et al., 2012; Cheng et al., 2015). Firms adopt assurance to send signals to investors, with the aim of influencing investors' perception of the firm's management, the firm's performance and the credibility of the information disclosed (Ballou et al., 2012; Brown-Liburd et al., 2012; Brown-Liburd & Zamora, 2015; Cheng et al., 2015; Connelly et al., 2011; Hodge et al., 2009; Merkl-Davies & Brennan, 2007). Disclosing positive CSR information often raises concerns about greenwashing (Lyon & Maxwell, 2011) and impression management (Merkl-Davies & Brennan, 2007). Adopting assurance sends signals to the investors that the company is putting in an effort towards communicating accurate, transparent and reliable information (Cheng et al., 2015). Therefore, assurance seems to send positive signals about the quality and credibility of the information disclosed, especially when combined with positive news to counteract the suspicions and concerns of greenwashing and impression management often associated with positive CSR disclosure (Coram et al., 2009; Lyon & Maxwell, 2011; Mahoney et al., 2013; Merkl-Davies & Brennan, 2007).

This cycle of positivity increases investors' confidence in the current and future performance of the disclosing firm (Coram et al., 2009). The increase in confidence is often translated into invstors' greater willingness to pay (a greater amount) for the firm's shares; this willingness has been demonstrated in other studies by positive changes in participants' evaluations of share prices (where assurance was both present and absent) (Brown-Liburd & Zamora, 2015; Coram et al., 2009; Hodge et al., 2009; Pflugrath et al., 2011; Pinsker & Wheeler, 2009). A greater willingness to pay should increase the demand for the disclosing firm's shares, should result in higher firm value and should cause a reduction in the cost of raising equity capital (Casey & Grenier, 2015; Lang & Lundholm, 2000).

Since assurance is voluntary in most countries, including Australia and New Zealand (KPMG, 2013a; KPMG, 2013c), motivations for adopting assurance have recently been explored (Kolk & Perego, 2010; Zorio et al., 2013). It appears that one important motivation for adopting assurance is the power of impression management in relation to quality signals sent to the public (Fernández-Feijóo-Souto, Romero, & Ruiz-Blanco, 2012; Romero, Fernández-Feijóo, & Ruiz, 2014). It is also evident that assurance is not cost-neutral, and is often an expensive choice (Cheng et al., 2015; Simnett et al., 2009). Therefore, the adoption of assurance is justified by benefits that are believed to outweigh costs (Simnett et al., 2009).

Previous studies have attested that CSR reporting may affect capital market responses (Dhaliwal et al., 2011; Dhaliwal et al., 2012). Cheng et al. (2015) found evidence that investors' perceptions seem to be the driver of their investment decisions. Dilla, Janvrin, Perkins, and Raschke (2014) found that assurance has a positive effect on investment desirability judgements made by nonprofessional investors who perceived information about environmental performance to be relatively more important. On the other hand, investors who believed that environmentally responsible companies yielded higher returns did not perceive assurance as a factor that affected investment desirability (Dilla et al., 2014). These findings

suggest that the differing environmental attitudes of investors influence their investment judgements.

Capital responses to assurance have rarely been investigated, except in experimental designs that often examine report users' confidence in assured information (Casey & Grenier, 2015; Fuhrmann et al., 2013). In addition, differences in share price assessments between assured and non-assured CSR and sustainability information remain largely unexplored (Brown-Liburd & Zamora, 2015; Coram et al., 2009; Dilla et al., 2014; Hodge et al., 2009; Peters & Romi, 2015; Pflugrath et al., 2011; Pinsker & Wheeler, 2009). This dearth of information leads to the first research question (RQ_1):

RQ_1: *Can CSR assurance increase firm value?*

Dhaliwal et al. (2011) found that US firms initiating CSR reporting experienced a reduction in cost of equity capital. They also documented that initiation is associated with an increase in institutional investors and analyst coverage, and is associated with lower forecast errors and dispersion (Dhaliwal et al., 2011). Dhaliwal et al. (2011) predicted those associations based on the premise that disclosure reduces information asymmetry between the reporting firm and the capital market. Furthermore, a second study by Dhaliwal et al. (2012) revealed evidence that stand-alone CSR reporting is associated with lower analyst forecast error rates. These combined results point to some of the benefits in reducing information asymmetry between the firm and other (outside) parties. Reducing information asymmetry is important when considering the firm's management of social and environmental risks, where it is essential for managers to signal to market participants the firm's long-term viability (Casey & Grenier, 2015). Consistent with Casey and Grenier (2015), the current research is based on the assumption that assurance can amplify CSR reporting benefits, especially the reduction

of information asymmetry. Assurance is associated with enhancing the quality of information disclosed to the public, thereby reducing the information gap between a company and its stakeholders. Assurance has this effect, because unverified, reported information actually lowers the public's confidence and the firm's performance. Assurance therefore acts as a means of communicating risk management strategies in relation to social and environmental disclosures (Casey & Grenier, 2015).

It appears that assurance enhances the prediction power of CSR information, which allows investors to assess both the firm's future performance and its strategic direction (Cheng et al., 2015). Casey and Grenier (2015) found that first-time assurance results in a reduction of the subsequent year's cost of equity capital. Consistent with Casey and Grenier (2015), the present study assumed that assurance would be a vehicle to increase investors' demand for shares in the subsequent year, thereby increasing firm value. This assumption leads to the current study's first hypothesis (H_1).

H_1: *Firms which adopt CSR assurance will experience higher firm value in the subsequent year, relative to firms that do not assure.*

In summary, this hypothesis predicts that assurance acts as a signal for CSR reporting quality. This signal is observed by investors and is translated into higher confidence in the company. This should increase investors' demand for shares and should also increase overall firm value.

3.3.2 Assurance statement quality.

One of the most important roles for CSR assurance is to signal the quality of CSR disclosure to the public, to narrow the credibility gap and to foster trust in such disclosure and

related company performance (Dando & Swift, 2003; Moroney et al., 2012; Simnett et al., 2009). However, CSR assurance as a practice lacks robustness, reliability and consistency (Dando & Swift, 2003; Hodge et al., 2009; Simnett et al., 2009). The literature covers various aspects on CSR disclosure quality. However, the quality of assurance statements has received less attention to date, despite scholars' concerns about quality (Hodge et al., 2009; Zorio et al., 2013).

The most cited studies that examine quality are O'Dwyer and Owen (2005) and Perego and Kolk (2012). According to these scholars, assurance statement quality can be elucidated by applying a minimum criteria set from the standards and guidelines for reporting, such as the *GRI* and guidelines produced by the FEE and AccountAbility (the *AA1000 AS and AA1000 APS*) (O'Dwyer & Owen, 2005; Perego & Kolk, 2012). Minimum criteria serve as the basis for determining quality by enhancing comparability, credibility and stakeholder responsiveness.

Aspects of assurance statement quality seem to be largely associated with the level of assurance and the assurance provider's profession, and the set of standards used. Assurance statements also rely on an extremely variable set of eclectic standards (Perego & Kolk, 2012). This suggests that there is ample room for research investigating the quality of assurance statements, particularly in New Zealand in Australia. The KPMG (2013b) group has indicated that assurance rates are increasing globally but are lagging behind the rate at which firms adopt CSR reporting. If CSR assurance proves to be value-relevant, this may result in accelerating adoption of CSR assurance. The KPMG (2013a, 2013b,2013c) reports, however, do not provide an assessment of the quality of assurance statements in Australia and New Zealand. Therefore, this presents a great opportunity to contribute to the literature by investigating the quality of assurance statements in Australia and New Zealand, as well as examining if there is

any value added by higher quality assurance statements. This opportunity leads to the second research question in the current study.

RQ_2: To what extent does the quality of the CSR assurance statement affect firm value?

Based on the literature, one would expect that the higher the quality of the assurance statement, the higher the value relevance of the assurance. One would also expect that an assurance statement of higher quality would strengthen the assurance signal, on the basis that investors pay attention to assurance statement quality. This reasoning leads to a second hypothesis.

H_2 : Firms with higher CSR assurance quality are likely to experience higher firm value in the subsequent year.

As investors become more concerned with information credibility, they are likely to become more educated about the factors that contribute to assurance statements' quality. Investors might associate the use of certain reporting guidelines or assurance standards, the scope of the assurance engagement, the independence of the assurance provider, the level of assurance, the type of the assurance provider (Manetti & Becatti, 2009; Perego & Kolk, 2012) and other recurring aspects and patterns with actual quality.

There are certain aspects that are often associated with higher quality, which have been examined repeatedly in the literature, especially in experimental design studies. These are 1) the level of assurance, 2) the type or the profession of the assurance provider, and 3) the difference between non-Big Four accountants and Big Four accounting firms. Each of these attributes of quality constitutes a signal. Signalled attributes of quality are explained in the following paragraphs.

Level of assurance is associated with level of audit risk in the assurance procedure (AccountAbility, 2008b; Manetti & Becatti, 2009). Reasonable levels of assurance reduce risk levels, but do not eliminate risk. A reasonable level of assurance is often difficult to achieve, and requires a higher level of skill and a greater level of engagement. Providing a reasonable level of assurance is difficult, because both quantitative and qualitative information must be combined (IAASB, 2013; Manetti & Becatti, 2009). Therefore, a reasonable level of assurance translates into a higher level of quality, and the word "reasonable" thus signals higher reliability.

The difficulty of obtaining reasonable assurance, and the high reliability associated with it leads to the following hypothesis.

H_3: *Higher levels of CSR assurance indicate higher assurance quality; therefore, firms with CSR assurance statements of a reasonable level are likely to realise higher firm value in the subsequent year.*

Unlike financial reporting that is compulsory and regulated, and where accountants enjoy a monopoly on the market of financial auditing, the market for assurance on CSR reporting is voluntary, unregulated and competitive (Cohen & Simnett, 2014; Simnett et al., 2009). Independent verification or assurance statements can be provided by accountants and auditors, specialists and consultants, certification bodies and others (Ackers, 2015; Perego & Kolk, 2012). The market for CSR assurance is enriched by diverse skills and capabilities, provided by various assurance providers who come from divergent professional backgrounds. This variability is a significant determinant of assurance statement quality and the choice of assurance standards used.

Empirical evidence about whether accountants enhance the quality of CSR assurance is mixed. Moroney et al. (2012) did not find that assurance by accountants improved environmental disclosure quality. Perego and Kolk (2012) also found that accountants do not improve the assurance quality score significantly. In fact, they found that environmental specialists and accountants scored differently for different criteria. Accountants seemed to provide better-formatted reports and vigilant assurance procedures, whereas specialists scored higher for criteria that required elaboration, such as recommendations and conclusions. Nevertheless, accountants and auditors are known for their high skills and adherence to the code of ethics and independence requirements; accounting as a profession is trusted by the community (Simnett et al., 2009).

Signalling theory suggests that firms will choose to voluntarily assure their CRS disclosures and will choose an auditor in order to distinguish themselves as higher quality firms in the market (Cheng et al., 2015; Connelly et al., 2011). Therefore, the present research is based on the assumption that firms will choose an assuror from the accounting profession to signal higher quality. Accountants signal quality to the users of the sustainability reports, who are concerned with assurance, because accountants are trusted by the community. The choice of the assurance provider is expected to affect firm value, as suggested by the following hypothesis.

H_4 : *CSR assurance statements that are produced by accountants have higher quality relative to assurance statements produced by environmental specialists (consultants), and therefore, firms that have had their CSR reports verified by accountants are likely to experience higher firm value in the subsequent year.*

Audit literature suggests that higher fees and the premium fees charged by the Big Four accountants can be associated with higher quality, due to Big Four firms' reputations and depth of specialisation (Barton, 2005; Choi, Kim, Liu, & Simunic, 2008; Craswell, Francis, & Taylor, 1995; Moizer, 1997). Clearly, some audit firms enjoy a better reputation than others. This differential has been documented in many studies (Barton, 2005; Choi et al., 2008)

Audit and assurance scholars often discuss how the reputation of the auditor affects the quality and the perception of the information disclosed. Barton (2005) suggested that highly visible, capital market firms tend to engage with highly reputable auditors. In addition, such firms attempt to boost their reputation for credible reporting (Barton, 2005). Research in audit quality has established many motivations for employing one of the Big Four accountants, including reputation and experience (Barton, 2005; Choi et al., 2008; Moizer, 1997). Therefore, in the current research, it is assumed that the engagement of one of the Big Four firms as an assurance provider acts as a signal of higher quality assurance and credible CSR reporting, which is likely to affect firm value positively, as stated by the hypothesis below.

H_5 : *CSR assurance statements that are produced by one of the Big Four accountants have higher quality. Therefore, firms engaging Big Four assurance providers are likely to experience higher firm value in the subsequent year.*

3.4 Chapter Summary

In summary, viewing CSR assurance under the aegis of signalling theory suggests that companies produce assurance statements with the aim to signal higher quality CSR disclosure. Perceptions about the quality of assurance statements vary. It seems that firms need to distinguish themselves by providing higher assurance quality. Assurance quality is signalled by attributes, such as 1) the level of assurance, 2) the profession of the assurance provider, and

3) whether the assurance provider is one of the Big Four accounting firms. The most common attributes of quality are signals of quality, and their effect on firm value is suggested by the five hypotheses proposed in Section 3.3. Each of the five mooted hypotheses accounts for one of the signals.

Chapter Four: Research Methods

4.1 Data Selection and Sampling

The current research aimed to examine whether CSR assurance increases firm value. The present research extended existing analyses examining the effect of assurance quality, not only the existence of assurance. The focus of the study regional, covering New Zealand and Australia. Only NZX50 companies were selected for inclusion, because they are often used as a collective proxy for the largest, investable and most liquid New Zealand companies listed on the New Zealand Stock Exchange (NZX) (NZX, 2015).

The Australian ASX100 represents a mixture of large and mid-cap securities, and is also one of the most-used benchmark indices for the Australian market (Market Index, 2015). As the NZX50 sample did not include enough assurance reports, ASX100 companies were included in the sample. Both the NZX50 and ASX100 are adjusted and rebalanced quarterly. The indices' compositions reported herein are as they appeared on September 18th, 2015, for both the NZX50 and the ASX100.

In the current research, CSR and assurance reports were collected for the year 2014. Financial data and control variables were collected for the 2015 financial year. This allowed for examining the lead-and-lag effect, which is consistent with signalling theory and the hypotheses developed, an approach supported by researchers such as Dhaliwal et al. (2011) and Casey and Grenier (2015). This approach has been taken because the hypotheses proposed indicate that such a signal requires a period of time to be noticed by investors.

In some cases, the most recent CSR report with an assurance statement for 2013 was obtained. This was done in three situations. The first involved a company for which the last financial reporting date was December 31st, 2014; hence, assurance information for 2013 was obtained in order to keep the sample consistent for lead-and-lag-effect testing. The second case involved a company that had produced CSR reports for 2013 and 2014, but only the 2013 report

was assured. The third case involved missing financial data for the year 2015 because Bloomberg did not provide any financial data for the company for 2015, even though it was clear that the reporting date for that particular company had already passed. Missing financial data included some companies in the sample that work to a fiscal year ending on March 31st, 2015. It was clear that their financial statements were likely to be available by the time the data were collected, but Bloomberg did not provide any data.

Since the focus in this study is to investigate whether assurance affects firm value, I decided that it was not necessary to rely exclusively on assurance statements issued in 2014, as long as the data collection methodology and tests were consistent throughout the sample. However, since one of the aims of the present study is to shed light on recent assurance practices and assurance quality, it was important to obtain assurance statements for no earlier than 2013. The sample remains largely representative of 2014 since 70% of companies provided assurance in 2014 and only 30% of them provided assurance in 2013.

Sample selection and breakdown is shown in Table 1. New Zealand and Australia were the countries chosen, because at the time this study was conducted, there were no published studies about assurance quality in New Zealand. In addition, Australian companies have been included by Perego and Kolk (2012), but I have not found any studies that exclusively examine assurance quality in Australia.

In the Perego and Kolk (2012) sample, which covers the years 1999, 2002, 2005 and 2008, Australia was one of the countries that recorded the lowest number of CSR reports and assurance statements. However, assurance in Australia has increased recently and is almost in line with global figures (KPMG, 2013a). Despite my interest in conducting a local study to understand assurance in New Zealand, the lack of studies about assurance led to concerns about the number of assurance reports that actually exist in New Zealand. This might not have been an issue if the current study had involved the collection of only qualitative data on assurance

practices and assurance quality, which could have been done as a longitudinal study. However, the present study was a cross-sectional one, and required quantitative data to determine quality scores obtained from assurance statement content analysis; such data collection was necessary to be able to examine how assurance and assurance quality affect a company's value. This challenge made it difficult to rely on the New Zealand market only; therefore, Australia was included in the sample, because Australia was expected to provide a higher number of observations for assurance, based on figures reported in the KPMG survey (2013a).

Table 1
Sample Selection and Breakdown

Panel A

Item	Number of companies (*N*)	Percentage of the overall sample
Initial sample	150	100%
Disclosing companies	110	73%
Companies providing CSR assurance	36	24%

Panel B

Item	Item description	Australia		New Zealand		Total for both countries	
CSR report	Yes	88	88%	22	44%	110	73%
	No	12	12%	28	56%	40	27%
	Total sample	100	100%	50	100%	150	100%
Assurance	Assured	30	34%	6	27%	36	33%
	Not assured	58	66%	16	73%	74	67%
	Total disclosing companies	88	100%	22	20%	110	100%

Panel A in Table 1, shows the breakdown of the overall sample, whereas panel B shows the adoption of CSR reporting and assurance for each country. Table 1, Panel B shows that the New Zealand sample contains only 22 companies that have disclosed CSR information and only six assurance statements, which represents 12% of the NZX50 companies and 27% of the companies that practice disclosure, respectively. In Australia, 88% of companies report on sustainability, whereas only 30 companies assure their CSR reports, representing 34% of those who disclose. Overall, 36 companies issue an assurance statement to accompany their CSR reports, representing 24% of the overall sample. This represents 33% of the companies disclosing CSR information.

Table 2 shows the provision of CSR reports and assurance statements, organised by sectors. The financial sector is the most represented in the sample (40 companies), followed by materials (21 companies), industrials and consumer discretionary (20 companies), while telecommunication services (four companies) and information technology (four companies) are the sectors that are least represented in the sample. The financial sector dominates the sample in terms of CSR reporting (30 companies), as it does with assurance (14 financial sector firms assure), but the energy sector has the highest percentage of CSR reporting (87.5%) and assurance (37.5%), followed by financials, with a 75% reporting rate and a 35% assurance rate. Overall, all the sectors in the sample have a CSR reporting rate that is 50% or above, except for information technology, which seems to be well behind all the other sectors, with only 25% percent of these companies reporting CSR information, and none providing assurance.

Table 2

Corporate Social Responsibility (CSR) Reporting and Assurance Breakdown by Sector

				ASSURANCE		
Sectors	Yes	No	CSR report total	Assured	Not assured	Assurance total
Consumer discretionary	14	6	20	2	12	14
	70%	30%	100%	14%	86%	100%
Consumer staples	5	2	7	2	3	5
	71%	29%	100%	40%	60%	100%
Energy	7	1	8	3	4	7
	88%	13%	100%	43%	57%	100%
Financials	30	10	40	14	16	30
	75%	25%	100%	47%	53%	100%
Health care	8	6	14	0	8	8
	57%	43%	100%	0%	100%	100%
Industrials	16	4	20	5	11	16
	80%	20%	100%	31%	69%	100%
Information technology	1	3	4	0	1	1
	25%	75%	100%	0%	100%	100%
Materials	18	3	21	6	12	18
	86%	14%	100%	33%	67%	100%
Telecommunication services	2	2	4	1	1	2
	50%	50%	100%	50%	50%	100%
Utilities	9	3	12	3	6	9
	75%	25%	100%	33%	67%	100%
Overall sample	110	40	150	36	74	110
	73%	27%	100%	33%	67%	100%

4.2 Data Sources

CSR reports and assurance statements were hand-collected from the companies' websites for both NZX50 and ASX100 companies. Social and environmental disclosures are normally sticky (Dhaliwal et al., 2011), as reports may not necessarily be produced on regular basis. This made the data collection process for the current study very difficult and time-consuming. Official company websites were searched for CSR and sustainability reports; social and environmental sections in annual reports or online disclosures were also sought. The ESG disclosure score from Bloomberg was used to confirm ESG information disclosure. The ESG disclosure score is a score for the disclosure of environmental, social and governance information.

Generally, in the current sample, companies that did not disclose social and environmental information had a very low ESG score, which motivated further investigation into each component of the score. If the company only provided governance (G) reporting, and did not have any environmental (E) and/or social (S) indicators, then the company was considered to be a non-disclosing company, and consequently ranked as having no assurance.

Moreover, some companies qualified for receiving a social disclosure score, but it appeared that this score was based solely on the nature of their business. For example, insurance and medical companies, and elderly care centres seemed to accrue a social score. That score seemed to be associated with the nature of their work and was not a part of voluntary corporate and social disclosure. Other companies did not seem to be eligible to have an environmental score, and did not report on the environment. However, if community services was not the main purpose of their business, then these companies were considered to be disclosing companies as long as they provided dedicated, detailed write-ups of their 2013–2014 social efforts and community services in their annual reports or on their websites.

In general, the ESG disclosure scoring was used only as a check in the current study to help decided when a firm was disclosing and only if other information provided was vague. All financial data and control variables were collected from Bloomberg. Data were collected between September and December 2015.

4.3 CSR Disclosure and Sustainability Reports

In this research, a company was considered to be a disclosing company if it provided sufficient information regarding sustainability in a stand-alone report, part of the annual report or on the company website. The reports did not need to meet the requirements of the *Global Reporting Initiative GRI* or the *International Integrated Reporting Framework <IR>*. Reports were accepted any format, as long as they represented voluntary disclosure of the most recent CSR performance measures and metrics. General sustainability policies and goals were not regarded as disclosure. This decision was made because such information is normally short on detail and moreover, provides only a loose description of future goals and overall CSR strategy of the company. The information is not, therefore, based on actual performance measured. It was therefore not considered in the current analysis.

4.4 Content Analysis

The current research employed a thematic content analysis methodology to analyse the content of assurance statements in order to reveal the value added by the quality of the assurance statement to the assurance signal. The aim of this content analysis was to obtain a quality score that can be used to determine assurance statement quality, and subsequently to test if assurance quality is a significant factor in the effect of assurance on a firm's value.

Content was analysed based on the standards most used by reporting companies around the world, which are the *ISAE3000* and *AA1000 AS* (Gillet, 2012; O'Dwyer & Owen, 2005;

Perego & Kolk, 2012; Zorio et al., 2013). This approach is consistent with O'Dwyer and Owen (2005), Perego and Kolk (2012), Zorio et al. (2013) and Fuhrmann et al. (2013).

The starting point for the current content analysis was derived from Perego and Kolk (2012). Coding rules for the content analysis were based on the coding practices of Perego and Kolk (2012). The quality score from Perego and Kolk (2012) was derived from 19 criteria, with a maximum score of 27 points available. However, the scoring system in the current research was adapted to include further criteria based on findings from the literature and current observations of recurring patterns that appeared in sample assurance statements. The modified quality score therefore consisted of 22 criteria, with a maximum score of 30 points available (Table 3). The modification process was based on analysing a pilot sample of five assurance statements.

The coding procedure involved assessing each of the 22 items on the basis of existence, specific mention or reference of specific items in the assurance statements, in accordance with the standards. Some items were coded as zero or one, based on the simple existence or non-existence of items, while other items were coded to include three categories (zero,1, 2) that exhibit a ranking order (Table 3). For example, Item 19 in Table 3 *general conclusion/opinion*, illustrates that a more elaborate conclusion is given a score of 2, whereas a concise conclusion of one sentence only is given a score of 1.

Table 3 shows the coding rules used in the present research. It includes three content criteria additional to those supplied by Perego and Kolk (2012). In the analysis, these three items appeared to distinguish some reports from others and seemed to improve assurance quality. These criteria are 1) *limitations*, 2) *recommendations* and 3) *reliance*. *Limitations* and *recommendations* were coded as a score of one if they were covered in the assurance statement, and a score of zero for the absence of the item in the statement.

Limitations and recommendations often appeared in distinguished sections of the assurance statement. Recommendations and limitations are stressed in both the *AA1000 AS* (2008) and the *ISAE3000* (2013). In the current research, it was noted that there were some reoccurring themes and some differences across assurance statements. This observation encouraged further investigation of the reasons behind these differences and similarities. Furthermore, the characteristics and content criteria stipulated by the *ISAE3000* and the *AA1000 AS* were used to detect these similarities and differences (Fuhrmann et al., 2013).

The item *recommendations* was not included in Perego and Kolk's (2012) scoring criteria. The criteria set in the their codebook was based on the evaluative framework provided by O'Dwyer and Owen (2005), which seems to be primarily derived from the *AA1000 AS* and secondarily from the *GRI* and *FEE*. The provision of *Recommendations* is a minimum requirement in the *AA1000 AS* (2008) and was also included in the *ISAE3000* as a requirement in 2013. The reason it was not been included in the coding rules of Perego and Kolk (2012) was that their study utilised as older version of *AA1000 AS*, which dated back to 2003. Since recommendations are included in both sets of current standards, it was essential to include *recommendations* in the current study's modified coding rules. Also, in the sample collected, it seemed that most assurance statements included *recommendations*, regardless of the set of standards followed in the assurance engagement process. Therefore, *recommendations* can be considered as an important attribute that contributes to quality.

Experiencing limitations in the assurance process is often considered to hinder quality outcomes. Therefore, it could be argued that the item *limitations* can be considered as a negative attribute. Nonetheless, in the present research, *limitations* were included as a positive indicator, because *limitations* serve the purpose of increasing the readers' awareness of the pros and cons of particular assurance processes. Thus, the inclusion of the item *limitations* as an aspect and as an indicator of quality was appropriate, because it serves to ensure that investors

are aware of any limitations inherent in the assurance engagement, and allows investors to consider those limitations in their decision-making processes. This justification is supported by both standards, because they both stress that limitations should be communicated to stakeholders (AccountAbility, 2008b; IAASB, 2013).

Most assurance statements included a section to disclaim use by third parties and to stipulate that the statement had been prepared solely for the benefit of directors and management. Therefore, the criterion *Reliance* was developed. Although initial results from a pilot sample suggested that the criterion *Reliance* was unlikely to be met, analysing the reports with this criterion in mind was an essential analysis-by-discovery step. This step supported the main purpose of the current research, which is to investigate if assurance and assurance statement quality affect firm value (assuming that the driver of firm value is the investors' perception of the firm's credibility). Therefore, it was deemed essential to examine if any of the assurance statements disclaimed responsibility to third-party users or to investors.

Reliance could be argued to be similar to *addressee* (Table 3). However, *reliance* is different from *addressee*. *Reliance* is a criterion that is used to assess whether the assurance provider disclaims (denies) stakeholders and investors the ability to rely on the reported information. In other words, the assurance statement is not to be used by investors and is not written for them, and therefore does not provide investors with the confidence needed to make investment decisions. In my opinion, this disclaimer compromises the assurance statement's reliability. Unfortunately, assurance statements are often addressed to the managers or to the board of directors, as these people are often the assurance commissioners (Ball et al., 2000; O'Dwyer & Owen, 2005; Pinsker & Wheeler, 2009). Nevertheless, since assurance statements are publicly available, report users may consider relying on such statements in their decision-making processes.

The disclaimer denying any third-party users' *reliance* on the assurance statement has a negative influence on report users' perception. Therefore, *reliance* was coded differently, which can be seen as a reverse procedure compared to other coding activity. *Reliance* was coded as zero and one. However, a score of zero referred to the existence of a disclaimer. In contrast, a score of one was assigned when no disclaimer was evident in the assurance statement.

Impartiality towards stakeholders was not defined clearly by Perego and Kolk (2012), and is not explained clearly in the *AA1000 AS*. In fact, the explanation of impartiality is intertwined somewhat confusingly with independence. There is no clear distinction between the two terms in *AA1000 AS*. Therefore, to distinguish between independence and impartiality to stakeholders and based on my understanding of the *AA1000 Accountability Principles Standard* (*AA1000 APS*) (AccountAbility, 2008a), I developed a set of unique criteria to encompass the meaning inherent in the phrase "impartiality towards stakeholders". For example, statements that the assurance engagement had been approved based on a nil conflict-of-interest basis were considered to address impartiality, thereby scoring one for impartiality. If no statement about conflict of interest could be found, the assurance statement scored a zero. It must also be noted that stakeholder "inclusivity" in the *AA1000 APS* which was released in year (2008) replaced "completeness", as mooted in the *AA1000 APS* which dates back to 2003. This decision was made because the seminal study by Perego and Kolk (2012) followed the *AA1000 AS,* which was issued in 2003, while the current research relied on the most recent version of the *AA1000 AS,* issued in 2008.

4.4.1 Validity of the content analysis process.

Since the content analysis sample consisted of 36 assurance statements only, the initial coding exercise was completed using five assurance reports, following Perego and Kolk's

(2012) methodology. The coding was completed by one researcher, the author of this dissertation. The aim of the initial coding process was to derive a complete set of coding rules. The coding rules derived included the new, additional criteria — limitation, recommendation and reliance.

After the development of the coding rules, I analysed 36 assurance statements. To ensure the new coding system's reliability, 10 random companies were selected (from the previously analysed 36 companies) a month later, and content analysis was repeated on the new sample.

The total quality scores obtained for the 10 assurance statements were very similar to those recorded at the main content analysis stage ($N = 36$), but there was still a need to conduct a further test to ensure that the results from the content analysis were reliable. The two repeated trials of the overall *AssurQuality* score measured the same construct as quality; therefore, the rate of agreement between the two sets of scores obtained at two different points in time required comparison to establish test–retest reliability.

According to Neuendorf (2002), Cronbach's alpha (α) is used to measure internal consistency between items that measure the same construct. Although it is common to use Cronbach's alpha to measure the rate of agreement between different items that make up the score, it appeared to be acceptable to use Cronbach's alpha in this case, since the two scores measured the same construct. Generally, a result of $\alpha = .80$ is considered to be an acceptable value indicating reliability (Field, 2013; Krippendorff, 2004; Neuendorf, 2002). In the present endeavour, a value of $\alpha = .998$ was obtained from the two *AssurQuality* scores, which suggested that the scores obtained at two different times were consistent and reliable. Furthermore, the two items were also highly correlated ($r = .996$). Obtaining a high rate of agreement was expected, because a limited amount of words appears in any assurance statement (which usually does not exceed 2 pages), and because standardised and technical jargon reoccurs in

most statements, thereby reducing the possibility of subjective interpretation of the coding procedure (Perego & Kolk, 2012).

Table 3
Coding Rules for Content Analysis

Ranking criteria	Definitions	Scale (total = 30 points)
1. Title	Title of the assurance document	0 No reference
		1 Reference
2. Addressee	Party to whom the assurance statement is formally address (either in title separate address line or within text)	0 No reference
		1 Addressee internal or "the readers"
		2 Stakeholders as the addressees
3. Name of assuror	Name of the firm that conducted the assurance engagement	0 No reference
		1 Reference
4. Location of assuror	Location/address of the office of the assurance provider	0 No reference
		1 Reference
5. Report date	The date at which the assurance exercise was finished	0 No reference
		1 Reference
6. Responsibilities of reporter	Explicit statement that reporter is responsible for preparation of report (keywords: responsible, responsibility)	0 No reference
		1 Reference
7. Responsibilities of assuror	Explicit statement that the reporter is responsible to express an (independent) opinion on the subject matter (the sustainability/environmental/social report)	0 No reference
		1 Reference
8. Independence of assuror from reporting organisation	Statement expressing the independence of the two parties involved (a 1 is assigned as soon as the word(s) "independent" or "independence" appear anywhere in the assurance statement or in its title. Thus, remarks such as "this is an independent opinion" qualify for a score of 1 point	0 No reference
		1 Reference or statement expressing independence, or statement declaring that independence statement can be found on the company website
9. Impartiality of assuror towards stakeholders	Assuror's declaration of impartiality with respect to shareholder interests	0 No reference
		1 Reference (a remark that such a declaration can be made available on request or is available on the company website qualifies)
10. Scope of the assurance engagement	Assurance statement coverage (a score of 1 is assigned if coverage of the assurance exercise is stated anywhere in the document)	0 No reference
		1 Reference

Ranking criteria	Definitions	Scale (total = 30 points)
11. Objective of the assurance engagement	Objective (aim) to be achieved through the engagement (indicating the level of assurance intended)	0 No reference
		1 Review, limited assurance, independent opinion, independent assurance, external verification, external assurance or validation
		2 Reasonable assurance or reasonable and limited assurance (e.g., two different levels of assurance for different parts of the report)
12. Competencies of the assuror	Description of the professional skills that enable the contracting firm to conduct the exercise	0 No reference
		1 Statement claiming competency (but no explanatory note) or reference to engaged firm's website
		2 Explanatory statement of competencies based on prior experience/engagements
13. Criteria used to assess evidence and to reach conclusions	A statement that makes reference to particular criteria against which the sustainability report has been prepared (e.g., *GRI* and often internally developed standards)	0 No reference
		1 Reference to publicly unavailable criteria
		2 Reference to publicly available criteria (e.g., internally developed criteria that are published anywhere in the report or GRI)
14. Assurance standards used	Standards used that govern the work of the assurance provider (e.g., *AA1000 AS* or *ISAE3000*)	0 No reference
		1 Reference to publicly unavailable criteria
		2 Reference to publicly available criteria
15. Summary of work performed	Statement explaining the actions taken to arrive at a conclusion	0 No reference
		1 Reference
16. Materiality (from a stakeholder perspective)	Degree of information provision on materiality level. If the conclusion states that the report is in conformance with the *AA1000* principles (materiality, inclusivity and responsiveness), this qualifies as a reference and thus a score of 1 is assigned	0 No reference
		1 Reference limited to a broad statement (e.g., "covers all material aspects" or "… in all material respects"), but also includes negative statements claiming that assuror has not undertaken any work to confirm that all relevant/material issues are included
		2 Reference and explanation of materiality setting or reference limited to a broad statement plus stakeholder perspective introduced

Ranking criteria	Definitions	Scale (total = 30 points)
		3 Reference/explanation of materiality setting and stakeholder perspective introduced
17. Inclusivity	Statement expressing that the firm accepts its accountability to those on whom it has an impact and to those who have an impact on it	0 No reference
		1 Reference
18. Responsiveness to stakeholders	Statement referring to the organisation's procedures (or lack thereof) for identifying stakeholder interests and concerns. If the conclusion states that the report is in conformance with the *AA1000* principles (materiality, inclusivity and responsiveness), this qualifies as a reference and a score of 1 is assigned	0 No reference
		1 Reference
19. General conclusion/opinion	Statement expressing the result of the assurance exercise. If there is no general conclusion, but the conclusion refers solely to the three principles of the *AA1000* (materiality, inclusivity, and responsiveness), a score of 0 is assigned	0 No reference
		1 Statement expressing the opinion of the assurer (e.g., "XY's report is a fair presentation of XY's corporate social responsibility (CSR) performance"). A score of 1 is assigned only if the conclusion consists of only one sentence
		2 Explanatory statement (more than one sentence, but recommendations for improvement are not considered part of the conclusion
20. Reliance	Statement to disclaim any responsibility of the assuror for any reliance on the assurance statement by third-party users	0 Statement includes a disclaimer
		1 Statement does not include a disclaimer to third-party users
21. Recommendations	Description of any suggestions raised to the management to improve the quality of their disclosure	0 No reference
		1 Reference
22. Limitations	Description of limitations, restrictions and drawbacks that may hinder the quality of the assurance engagement	0 No reference
		1 Reference

General note. This table was adapted from Perego, P., and Kolk, A. (2012). Multinationals' accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics*, *110*(2), 173-190.
Specific note. Inclusivity criterion (number 17) replaces completeness, as per the most recent version of the *AA1000 AS*, which was issued in 2008.

4.5 Model 1: Assurance Value Relevance

Firm value is a function of various factors that may or may not be within the firm's control. Some of these factors may be internal, others could be external. Assurance is not the only factor that can affect firm value. In fact, despite the hypotheses and expectations proposed, a relationship between firm value and assurance might not exist at all. Control variables are needed to ensure that the relationship between firm value and assurance is not distorted by other factors, and is free from bias (Callan & Thomas, 2009).

In the current study, control variables were identified from the voluminous literature exploring the association between a firm's value and CSR disclosure, as well as from various studies in different fields that examined factors affecting company value. Common control variables included in various models in the literature include factors related to firm size, market risk and industry effects (Callan & Thomas, 2009). In the present study, country and industry effects were not included in the initial model, but they were included later, when a sensitivity analysis was conducted. The dependent variable in the model was set as market capitalisation, or *MarketCap*.

The model used in this study was adapted from the model used in Cahan et al. (2015). The model used in Cahan et al. (2015) employed Tobin's *Q* as a measure of firm value. The model used in the current study employed market capitalisation as a measure of company value. Although the dependent variable in the current model was not Tobin's *Q*, associations between *MarketCap* and the control variables in the model were expected to be very similar to associations between control variables in the Tobin's *Q* model. This expectation arose from the fact that Tobin's *Q* obtained from Bloomberg includes *MarketCap* as a component in the numerator of the ratio. Therefore, any increase in *MarketCap* drives the desired increase in Tobin's *Q***.** Hence, it was valid to assume that the relationship between *MarketCap* and the control variables should have been similar to the associations between Tobin's *Q* and the control variables in Cahan et al. (2015).

The only variable that was excluded from the current study's model was *Research & Development (R&D) Expenditure*. It was excluded due to missing variables.[2] Thus, the current model , and hereafter referred to as Model 1, after excluding *R & D*, is as follows:

$$MarketCap_t = \beta_0 + \beta_1 ASSURANCE_{t-1} + \beta_2 SIZE_t + \beta_3 ROA_t + \beta_4 TOBIN\ Q_t + \beta_5 LEV_t + \beta_6 CAPEX_t + \beta_7 VOLAT_t + \beta_8 STOCKTURN_t + \beta_9 INTANG_t + \beta_{10} DIVIDEND_t + \varepsilon \quad (1)$$

Model 1 includes control variables that are similar to the control variables used by Cahan et al. (2015). However, the predictors of interest are different. The main variable of interest in the model used in Cahan et al. (2015) was CSR disclosure, and it was divided into expected and unexpected portions. The unexpected portion was the variable of interest in the Cahan et al. (2015) model. In Model 1 in the current study, the chosen variable of interest was *ASSURANCE*. *ASSURANCE* describes whether the company assured in the prior year (*t-1*). *MarketCap* and the rest of the control variables in the model were all set at the current year (*t*). The reason for this lead-and-lag effect is that the CSR assurance statement is often released after the reporting date (the end of the financial year). Such news often takes time to be observed by market participants and takes time to be reflected in the share price (Gordon, Loeb, & Sohail, 2010; Uyar & Kiliç, 2012). Variable descriptions and sources are summarised in Table 4.

4.5.1 The dependent variable.

MarketCap is one of the oldest and simplest measures of firm value. As defined in Table 4, it represents the number of shares outstanding multiplied by price per share,

[2]Using *R & D Expenditure* reduces the number of cases included in the analysis, thereby affecting the significance and inference of the analysis.

which represents the market value of firm equity. *MarketCap* is a direct measure of the effect of the stock market response to news and voluntary disclosure. It measures investors' confidence, market sentiment and the desirability of firm's stocks (Daniel et al., 1998; Lev & Penman, 1990).

Uyar and Kiliç (2012) and Gordon et al. (2010) found that voluntary disclosure had a significant positive association with the market value of a firm. These two market value-related studies supported the existence of the signalling effect of managers' strategic decisions about disclosing voluntary information to positively influence firm value. *MarketCap* is consistent with the hypotheses proposed in the current study, as share prices respond to investors' perceptions of companies and their actions. When confidence in a company's stock is high, market participants bid the price of the stock higher (Daniel et al., 1998). Thus, confidence in the future performance of a firm is the key driver of the market value of its equity (Daniel et al., 1998).

4.5.2 Independent variable of interest.

In the current study, *ASSURANCE* is a dummy variable, where a score of one indicates that the firm adopts assurance, and a score of zero indicates otherwise. This is consistent with several other studies illustrating the effect on performance measures as a result of adopting assurance or CSR disclosure (Casey & Grenier, 2015; Dhaliwal et al., 2014; Moroney et al., 2012; Zorio et al., 2013). Consistent with the signalling effect of voluntary disclosure (Gordon et al., 2010; Uyar & Kiliç, 2012), *ASSURANCE* acts as a strategic decision (Cheng et al., 2015) and was expected to positively affect *MarketCap* in the current research, as hypothesised in H_1.

4.5.3 Assurance quality Score and Attributes of quality.

AssurQuality is a score obtained from content analysis that is consistent with Perego and Kolk (2012). In the present research, *AssurQuality* replaced *ASSURANCE* in Model 1, used to investigate H_2 . This score does not use weighting to account for the relative importance of specific quality sectors. As explained in Section 4.4, "Content Analysis", the coding procedure was derived from evaluating items described in Table 3, on the basis of existence or reference. The score for some items tended to reflect ranking. Higher rankings were given for statements that included elaborations and clarifications, as opposed to the mere reference of an item. For example, in Table 3, *Materiality* (ranking criterion 16) and *General conclusion/opinion* (ranking19), required a distinction to be made between the mere reference and the explanation (Perego & Kolk, 2012).

Level of Assurance, *Assurance Provider Profession* and *Big Four* have been widely used in the literature as attributes of assurance quality. Therefore, they were included in the analysis; these attributes are explained in the following paragraphs.

Level of Assurance is a dummy variable, where a score of zero represents limited (moderate) assurance, while a score of one represents reasonable (high) assurance. Because the level of assurance has been widely used by previous researchers as an aspect of quality that receives attention by investors and affects their price judgements (Brown-Liburd et al., 2012; Brown-Liburd & Zamora, 2015; Hodge et al., 2009), it was important to examine it for any effect on firm value. Therefore, *Level of Assurance* replaced *ASSURANCE* in Model 1 to test H_3, and was expected to increase *MarketCap*.

Assurance Provider Profession was assigned the status of dummy variable, where a score of zero represented environmental specialists, while a score of one represented accountants. Similar to *Level of Assurance*, *Assurance Provider Profession* has been widely described by scholars as an aspect of quality that receives attention by investors (Brown-Liburd et al., 2012; Brown-Liburd & Zamora, 2015; Hodge et al., 2009).

Therefore, it was important to examine the *Assurance Provider Profession* variable for any possible effect on firm value. *Assurance Provider Profession* substituted for *ASSURANCE* in Model 1 to test $H_{4,}$ and was expected to increase *MarketCap*.

Big Four was a dummy variable, where a score of one represented assurance providers who were one of the Big Four accounting firms and where a score of zero represented assurance providers who were not from the Big Four accounting firms. Big Four accounting firms enjoy better reputations because they are perceived to provide higher quality auditing and assurance services. The *Big Four* variable replaced *ASSURANCE* in Model 1 to test $H_{5,}$ and was expected to increase *MarketCap*.

4.5.4 Control variables.

According to Callan and Thomas (2009), appropriate control variables are essential to obtain reliable results and to eliminate bias. The following control variables were obtained after consulting the literature for control variables used frequently in similar empirical studies investigating the determinants of firm value and financial performance. All variables employed in the current study were either obtained from Bloomberg directly, or were calculated from figures obtained from Bloomberg unless otherwise stated.

The variable *SIZE* was measured by the natural log of total assets. Natural log of total assets was used because the variables were not normally distributed; in addition, it is common in the literature to transform measures of size, because size is often non-normally distributed.[3] The size of the firm indicated the firm's ability and capability in utilising resources, and the variable *SIZE* was also an essential measure of the firm's efficiency. Larger firms were expected to be more efficient due to economies of scale

[3]SIZE or total assets is not normally distributed. Therefore, it has been normalised using the natural log which is a common practice in business research.

(Roll, Schwartz, & Subrahmanyam, 2009). Empirical results from the literature have suggested that firm value is positively associated with size (Cahan et al., 2015; Clarkson et al., 2013; Jiao, 2011; Roll et al., 2009; Uyar & Kiliç, 2012). Therefore, the association between *MarketCap* and *SIZE* was expected to be positive.

The *ROA* variable was obtained from Bloomberg and it was calculated as net income before ordinary items divided by total assets (Cahan et al., 2015), commonly known as return on asset (ROA). This variable was included as a measure of profitability, and it indicated the efficiency of management in using assets to generate earnings. Profitable firms are expected to attract more investors, therefore leading to higher valuations (Roll et al., 2009). The association between *ROA* and *MarketCap* was expected to be positive.

TOBIN Q is defined by Bloomberg as the

> ratio of the market value of a firm to the replacement cost of the firm's assets. The Q ratio is useful for the valuation of a company. It is based in the hypothesis that in the long run the market value of a company should roughly equal the cost of replacing the company's assets.

TOBIN Q has been used as a measure of information asymmetry (Clarkson et al., 2008; Cormier, Ledoux, Magnan, & Aerts, 2010; Moroney et al., 2012). However, some studies also considered it to be a measure of performance (De Villiers & Van Staden, 2011) and firm value (Cahan et al., 2015; Jiao, 2011; Luo & Bhattacharya, 2006; Roll et al., 2009). *TOBIN Q* was considered to be a measure of the "firm's long term expected value" (Cahan et al., 2015, p. 2). It was chosen as "the market's assessment of a firm's future cash flows and the riskiness of those cash flows" (Cahan et al., 2015, p. 2). The *TOBIN Q* variable was also a measure of intangibles (Dybvig & Warachka, 2015; Rubera & Droge, 2013). *TOBIN Q* is expected to be positively related to *MarketCap*.

In the current study, *LEV* was defined as total debt divided by total assets, and was used as a proxy for leverage (Cahan et al., 2015); it was also used to account for the

likelihood of financial distress (Roll et al., 2009). Leverage (represented by the proxy *LEV*) is one of the most-used control variables in the finance literature (Rao, Agarwal, & Dahlhoff, 2004). Higher leverage results in a greater interest-tax shield, which increases cash flows and subsequently, firm value.

Nevertheless, empirical studies from several studies have shown that leverage is negatively associated with firm value (Cahan et al., 2015; Callan & Thomas, 2009; Coles, Daniel, & Naveen, 2008; De Villiers & Van Staden, 2011; Rao et al., 2004; Roll et al., 2009). Some studies found that the association between firm value and *LEV* was dependent on growth opportunities available to the firm (Ahn, Denis, & Denis, 2006; Berger, Ofek, & Yermack, 1997; McConnell & Servaes, 1995). The company's level of investment was also found to be dependent on growth opportunities. A firm's value often rests on multiple investment decisions; therefore, firm value is related to underinvestment or overinvestment by management, which in turn is highly related to the level of debt constraints (Aivazian, Ge, & Qiu, 2005). Firms with higher growth opportunities are likely to experience lower leverage and higher firm value (Ahn et al., 2006; Berger et al., 1997; McConnell & Servaes, 1995). Hence, *MarketCap* could be expected to be negatively associated with *LEV*.

In the current study, *CAPEX* was constructed as a ratio to represent capital expenditure scaled by total assets, a construct obtained from Bloomberg and was also used by Cahan et al. (2015). Capital expenditure is a measure of investment opportunities. Higher capital expenditure indicates greater investment opportunities that are associated with greater growth opportunities and consequent, higher firm values (Roll et al., 2009). Therefore, *CAPEX* is expected to be positively associated with *MarketCap.*

The *VOLAT* variable was assigned to the standard deviation of daily stock returns for the year. Stock return volatility served as a measure of risk and information asymmetry (Clarkson et al., 2013; Clarkson et al., 2008; De Villiers & Van Staden, 2011).

Indeed, stock prices are less likely to fluctuate wildly if investors are fully informed about the firms' strategies, performance and future opportunities (De Villiers & Van Staden, 2011). According to Guo and Savickas (2006), the risk–return relationship is positive, as stock-market volatility increases stock-market returns. An increase in stock-market returns often results from a rise in the share price, which results in an increase *MarketCap*, assuming that the number of shares outstanding remains the same (Guo and Savickas, 2006). This indicates that, in the current study, *VOLAT* could be expected to associate positively with *MarketCap.*

STOCKTURN was used to describe the annual turnover of a firm's shares for the financial year (Cahan et al., 2015; Roll et al., 2009). Roll et al. (2009) proposed this variable to control for liquidity effects due to share trading, and expected it to have a positive association with firm value**.** However, Cahan et al. (2015) found a negative association with firm value. Results about the association of firm value and stock turnover are mixed in the available literature, but in the current study, it was expected that in Model 1, *STOCKTURN* would likely have a negative association with*MarketCap*, as in Cahan et al. (2015).

DIVIDEND was designated as a dummy variable equal to a score of one if the firm paid dividends, or a score of zero if no dividends were paid. Although Cahan et al. (2015) demonstrated that dividends reduce firm value when measured by Tobin's *Q*, dividends can serve as a proxy for capital constraints (Roll et al., 2009). Paying dividends is a signal about the company's ability to generate cash flows. Firms that pay dividends could have re-invested the cash flows in other projects. Paying dividends indicates that firms with excess free cash flows will pay out to shareholders rather than investing in unnecessary additional projects (Roll et al., 2009). Therefore, in the current study, the expected association between *DIVIDEND* and *MarketCap* was a positive.

INTANG was calculated as the ratio of intangibles scaled by total assets. Intangible assets include patents, trade corporate intellectual property (items such as patents, trademarks, copyrights), goodwill and brand recognition, which are all classed as common intangible assets (Wyatt, 2008). For example, brand recognition is an intangible asset that appears to have significant positive impact on stock prices and stock returns. Brand value affects the financial value of firms (Rao et al., 2004; Wyatt, 2008). Therefore, *INTANG* is expected to positively affect *MarketCap.*

4.6 Model 2: Assurance Quality Regression Model

4.6.1 Determinants of assurance quality.

To understand factors that contribute the most to the quality of the assurance statements, overall quality score was used as the dependent variable in a regression model. The four independent variables were 1) size, 2) profitability, 3) level of assurance and 4) type of assurance provider.

The quality score obtained from the content analysis was used to run a regression for quality. Following Zorio et al.'s (2013) model, Model 2 was used to determine the factors that contribute to assurance quality. The difference between Model 2 in the current research and the model used by Zorio et al. (2013) was that they did not include *Level of Assurance* in the model.

$$AssurQuality = \beta_0 + \beta_1\, SIZE + \beta_2\, ROA + \beta_3\, LEV + \beta_4\, Level\ of\ Assurance + \beta_5\, Assurance\ Provider\ Profession + \varepsilon \quad (2)$$

Assurance statements for the year 2014 were collected; in some cases, statements from the year 2013 were uplifted. Regardless of the year, contemporaneous control variables were used to generate scores. Model 2 did not account for lead-and-lag effect,

as did Model 1. This was because the purpose of Model 2 was to determine if the *Level of Assurance* and the *Assurance Provider Profession* variables affected *AssurQuality*. Control variables were included in Model 2 to account for financial factors that may have affected assurance quality during the year measured.

4.7 Meeting the Assumption of Normality

An examination of the standardised regression residuals histogram and *P–P* plot for the dependent variables *MarketCap* (Model 1) and *AssurQuality* (Model 2) showed no departure from normality. The scatterplot of the standardised regression residuals with the standardised predicted values did not show any departure from homoscedasticity. Considering the distribution of those variables and the tenets of the central limit theorem, as the sample was sufficiently large ($N > 100$), the parametric test could be safely applied. Also, regression analysis is generally robust to breaches of normality, as long as the residuals from regression are normally distributed. The statistical assumptions of regression were therefore met in the current study, as defined by Field (2013). Size was not normally distributed; therefore, natural log transformation was used to normalise it.

4.8 Chapter Summary

This chapter has presented the sampling and data collection methodologies. It has provided an overview of the models employed in this research (Model 1 and Model 2), and has described the variables used and the how they were obtained. It has provided a detailed description of the content analysis approach used to arrive at the assurance quality score. The next chapter will highlight the results of hypotheses testing by using the models described in this chapter.

Table 4
Summary of Variables and Definitions

Variables	Designations	Definitions	Source
Market capitalisation	*MarketCap*	Total dollar market value of a company's outstanding shares, measured in USD. It represents the market capitalisation as of the end of the fiscal year	Bloomberg
CSR report	*CSRreport*	Binary variable, 1 if a CSR report was issued or CSR information was reported on the website or included in the annual report, 0 otherwise	Hand-collected. ESG disclosure score was used as guidance, but companies' websites were checked for reports or any sort of voluntary CSR disclosure
Assurance	*ASSURANCE*	Binary variable, 1 if an assurance statement was issued, 0 otherwise	Hand-collected assurance statements — verification type in Bloomberg was used as guidance to identify potential companies that provided assurance
SIZE	*SIZE*	Natural log of total assets	Total assets obtained from Bloomberg. The natural was calculated in SPSS
Return on assets	*ROA*	Net income before ordinary items divided by total assets	Calculated from items collected from Bloomberg
Tobin's *Q*	*TOBIN Q*	(*Market Cap + Total Liabilities + Preferred Equity + Minority Interest*) / *Total Assets*	Bloomberg
Leverage	*LEV*	Total debt divided by total assets	Bloomberg

Table 4 *continued*

Variables	Designations	Definitions	Source
Volatility	*VOLAT*	A measure of the risk of price moves for a security calculated from the standard deviation of day-to-day logarithmic historical price changes. The 260-day price volatility equalled the annualised standard deviation of the relative price change for the 260 most recent trading days' closing price, expressed as a percentage	Bloomberg
Share turnover	*STOCKTURN*	Share turnover was calculated by dividing the volume of shares traded during the year, on the average of the outstanding shares at the beginning and the end of the year	Calculated from items collected from Bloomberg
Intangible ratio	*INTANG*	Ratio of disclosed intangible assets relative to total assets	Calculated from items collected from Bloomberg
Dividends	*DIVIDENDS*	Binary variable, 1 if the company paid dividends during the year, 0 otherwise	Bloomberg
Assurance quality Score	*AssurQuality*	Assurance quality score determined using assurance quality index as a percentage calculated using the actual score over the potential total score (30 points)	Content analysis of assurance statements
Level of assurance	*Level of Assurance*	Binary variable, 1 if the level of assurance was reasonable (high), 0 if it was limited (moderate)	Content analysis of assurance statements
Assurance provider profession	*Assurance Provider Profession*	Binary variable, 1 if the assurance provider was an accountant , 0 otherwise	Content analysis of assurance statements

Table 4 *continued*

Variables	Designations	Definitions	Source
Big Four	*Big Four*	Binary variable, 1 if the assurance provider was an accountant from the Big Four accounting firms, 0 otherwise	Content analysis of assurance statements
Use of *AA1000 AS* standards	*Use of AA1000 AS*	Binary variable, 1 if the standard used in providing assurance was *AA1000 AS*, 0 if it was *ISAE3000*	Content analysis of assurance statements
Adjusted assurance quality score	*Adjusted AssurQuality*	*AssurQuality* after excluding the effect of the *AA1000 AS*	*AssurQuality* after excluding the effect of the *AA1000 AS*
Environmental performance Score	*EnvironPerf*	Environmental disclosure score was part of environmental, social and governance (ESG) data. The score ranged from 0.1 to 100. Expressed as a percentage when used in the regression	Bloomberg
Social performance score	*SocialPerf*	Social disclosure score was part of ESG data. The score ranged from 0.1 to 100. Expressed as a percentage when used in the regression	Bloomberg
Environmental and social performance	*E&SPerf*	The average of *EnvironPerf* and *SocialPerf*. Expressed as a percentage when used in the regression	Bloomberg
Country	*COUNTRY*	Binary variable, 1 for Australia, 0 for New Zealand	A list of the ASX100AS and NZX50 was obtained from Bloomberg
Industry sensitivity	*Industry*	Binary variable, 1 for environmentally and socially sensitive industries, 0 otherwise	[1]*GICS* industry classifications from Bloomberg
Independence	*Independence*	Binary variable, 1 if the financial auditor and the assurance provider were different, 0 if the financial auditor and the assurance provider were the same	Content analysis of assurance statements + financial auditor checks from the annual reports
Governance	*Governance*	Governance disclosure score was part of ESG data. The score ranged from 0.1 to 100. Expressed as a percentage when used in the regression	Bloomberg

General notes. A 260-day price volatility calculation was used to approximate the number of trading days in the year. Although the number of trading days in New Zealand and Australia is less than 260 days, it is a closer estimate than 360 days.

Specific notes. All items labelled Bloomberg were calculated by Bloomberg, unless otherwise stated.

Abbreviation. [1]*GICS, Global Industry Classification Standard*.

Chapter Five: Results and Discussion

This chapter presents the results, discusses the findings and analyses the results in conjunction with related, previously published literature. The aim in this chapter is to test the research hypotheses by employing the regression model (Model 1). Model 2 results of the determinants of assurance quality are also explored in this chapter. Finally, supplementary analyses are presented in this chapter.

5.1 Descriptive Statistics

Table 5 presents descriptive statistics for the variables used in the analysis of the overall sample of 150 companies. As shown in Table 4 (in Section 4.8, "Chapter Summary"), the variables were collected from different sources. For variables that were hand-collected, such as *CSRreport* and *ASSURANCE, N* represented the total of number of relevant cases. For example, all companies in the sample were described by the variable *CSRreport* to identify whether they were disclosing *CSRreport* or not. *ASSURANCE* was only relevant for those companies that published a CSR report (i.e., 110 companies), and only for the subsample of those that assured the report (i.e., 36 companies); thus, only 36 companies received a score for *AssurQuality*.

As noted in Section 4.1, "Data Selection and Sampling", sample selection and breakdowns can be viewed in Table 1, an aid for interpreting results. For variables obtained from Bloomberg, the number (*N*) of the cases (companies) sampled for each variable was different, due to variables missing from the Bloomberg database. The mean (median) for *MarketCap* \$11,086.638(\$3,872.233), with a range from \$243.277 to \$138,160.749.[4] The mean (median) for *SIZE* was \$44,025.014 (\$4,156.679), and the range was from \$750.810to \$8,816.840.[5] *MarketCap* and *SIZE* variables showed

[4]*MarketCap* was measured in millions of dollars. *MarketCap* may not be normally distributed. Therefore, the natural log of *MarketCap* was used as a sensitivity test (not tabulated). The main results for hypothesis 1 (H_1) did not change.
[5]In Table 1, *SIZE* is measured as total assets and is expressed in millions of dollars. *SIZE* is measured as the natural log of total assets in the regression analysis.

variation in size between the companies in the sample. All dollar figures were measured in US dollars (USD).

Table 5
Descriptive Statistics for Variables

Variables	*N*	Means	Medians	*SD*s	Minima	Maxima
MarketCap	150	11,086.638	3,872.233	22,621.515	243.277	138,160.749
CSRreport	150	0.733	1.000	0.444	0.000	1.000
ASSURANCE	110	0.327	0.000	0.471	0.000	1.000
*SIZE***	150	44,025.014	4,156.679	155,598.416	750.810	8,816.840
ROA	150	0.057	0.050	0.082	–0.327	0.546
TOBIN Q	150	1.827	1.342	1.401	0.672	8.700
LEV	149	0.179	0.156	0.174	0.000	0.639
CAPEX	149	0.010	0.017	0.063	–0.195	0.249
VOLAT	143	0.232	0.218	0.098	0.000	0.591
STOCKTURN	150	0.848	0.821	0.500	0.025	2.573
INTANG	149	0.188	0.085	0.226	0.000	0.909
DIVIDEND	149	0.919	1.000	0.273	0.000	1.000
EnvironPerf	111	0.207	0.171	0.140	0.020	0.535
SocialPerf	120	0.333	0.317	0.140	0.053	0.684
E&SPerf	111	0.275	0.263	0.130	0.061	0.573
COUNTRY	150	0.667	1.000	0.473	0.000	1.000
INDUSTRY	150	0.667	1.000	0.473	0.000	1.000
AssurQuality	36	17.222	18.000	7.204	0.000	27.000

General notes. The explanation for these results is that the number of Australian companies equals the number of companies in sensitive industries. However, they are not the same companies. *N* changed due to missing variables.
Specific notes. *MarketCap* is measured in US dollars (USD) and expressed in millions. *SIZE* is measured in USD and expressed in millions. *COUNTRY* and *INDUSTRY* variables appear to be similar, but they measure different items. *AssurQuality* is shown as a number in this table, but is expressed as a percentage in the regression.

5.2 Bivariate Analysis

Table 6 displays Pearson (parametric) and Spearman (non-parametric) correlation matrices between the variables used in the analysis. The Pearson correlations indicate that *MarketCap* is significantly positively associated with *CSRreport*, *ASSURANCE*, *SIZE*, *EnvironPerf*, *SocialPerf* and *E&SPerf* ($p < .01$). *CAPEX* and *COUNTRY* are also significantly positively correlated with *MarketCap* ($p < .05$). Pearson correlations are consistent with the expectations presented in the model and control variables section earlier, except for *INTANG*, which is significantly negatively correlated with *MarketCap* ($p < .05$). The fact that most of the variables are significantly correlated (Spearman correlation) with *MarketCap* provides support for multivariate analysis. The significant positive correlation between *ASSURANCE* and *MarketCap* provides initial support for H_1.

The correlation coefficients between the variables range from –.378 to .930 for the Pearson correlation, and from –.493 to .931 for the Spearman correlation. This indicates that there is a range of correlations, from moderately negative correlations to strongly positive correlations. Correlations were performed to detect any indication of multi-collinearity. Multi-collinearity distorts results from ordinary least square regression (Field, 2013). *E&SPerf* is strongly positively correlated with *EnvironPerf* and *SocialPerf* ($p < .01$) for both Pearson and Spearman correlations. These high correlations were expected; the variables were not used in the same regression models, and therefore, they were not problematic. The correlations between *COUNTRY* and *CAPEX*, and between *COUNTRY* and *LEV*, are very strong (both in the Pearson and the Spearman correlations) and are significant ($p < .01$), which could raise concerns about multi-collinearity. Multi-collinearity can also be detected through variance inflation factors (VIF) and tolerance levels. High VIF and low tolerance indicate multi-collinearity (Field, 2013). According to Field (2013), the threshold to avoid multi-collinearity is that

tolerance should not be < .2 and that VIF should be not be > 3.0. The examination of collinearity diagnostics did not show any predictor to have a tolerance < .2 and confirmed that all VIF values are < 3.0. Therefore, multi-collinearity is not an issue in any of the regression models employed in the current study.

Table 6

Correlations Between Variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
(1) MarketCap	-	.243**	.484**	.722**	–.108	–.100	.127	.194*	–.057	–.128	–.163*	.107	.469**	.428**	.477**	.171*	.129	.214
(2) CSRreport	.527**	-	c	.474**	–.061	–.194*	.427**	.377**	–.004	.269**	.008	.266**	.141	.295**	.146	.469**	.181*	c
(3) ASSURANCE	.408**	c	-	.481**	–.200*	–.224*	–.027	.134	–.126	–.085	–.270**	–.174	.557**	.556**	.600**	.058	.179	c
(4) SIZE	.834**	.494**	.439**	-	–.293**	–.458**	.351**	.339**	–.022	.104	–.223**	.226**	.525**	.459**	.518**	.397**	.308**	.350*
(5) ROA	–.194*	–.122	–.207*	–.493**	-	.415**	–.104	–.026	–.017	.001	.071	.271**	–.285**	–.262**	–.309**	.049	–.142	–.135
(6) TOBIN Q	–.003	–.013	–.259**	–.448**	.506**	-	–.067	–.031	.207*	–.031	.111	–.181*	–.267**	–.160	–.243*	–.005	–.387**	.134
(7) LEV	.510**	.461**	–.007	.483**	–.122	.033	-	.603**	.135	.376**	.251**	.196*	.098	.128	.099	.693**	.065	.398*
(8) CAPEX	.507**	.419**	.133	.424**	–.024	.087	.676**	-	.178*	.416**	.085	.256**	.137	.287**	.227*	.736**	.086	.324
(9) VOLAT	.033	.046	–.125	–.019	–.046	.093	.140	.301**	-	.500**	.125	–.172*	–.014	–.020	.023	.309**	–.198*	–.013
(10) STOCKTURN	.199*	.325**	–.102	.186*	–.041	.040	.493**	.524**	.500**	-	.158	–.005	.035	.083	.075	.668**	.006	.159
(11) INTANG	–.074	.043	–.312**	–.188*	.129	.406**	.212**	.146	.183*	.216**	-	.114	–.247**	–.202*	–.245**	.154	–.368**	.167
(12) DIVIDEND	.201*	.266**	–.174	.185*	.195*	–.031	.218**	.235**	–.191*	.001	.118	-	–.097	–.107	–.103	.213**	.108	.404*
(13) EnvironPerf	.530**	.143	.526**	.545**	–.307**	–.262**	.115	.176	–.025	.086	–.318**	–.129	-	.727**	.930**	.176	.219*	.422*
(14) SocialPerf	.496**	.304**	.538**	.470**	–.215*	–.131	.155	.300**	.031	.107	–.233*	–.128	.747**	-	.928**	.197*	.176	.508**
(15) E&SPerf	.552**	.150	.573**	.533**	–.284**	–.215*	.114	.263**	.043	.087	–.299**	–.119	.931**	.930**	-	.195*	.188*	.517**
(16) COUNTRY	.574**	.469**	.058	.455**	–.047	.069	.747**	.814**	.379**	.723**	.182*	.213**	.181	.193*	.191*	-	.070	.458**
(17) INDUSTRY	.163*	.181*	.179	.306**	–.263**	–.373**	.069	.014	–.197*	–.001	–.398**	.108	.212*	.203*	.196*	.070	-	.026
(18) AssurQuality	.295	c	c	.206	–.052	.195	.282	.287	.243	.268	.212	.181	.345*	.543**	.462**	.362*	–.007	-

Specific notes. The following symbols indicate specific meanings: c, correlation coefficients could not be computed because at least one of the variables was constant.
Probability notes. Significant correlations are indicated by significant *P*-values, * at the 5% and ** at the 1% levels, respectively. Pearson correlation coefficients are above the diagonal. Spearman's rho coefficients are below the diagonal.

5.3 Regression Analysis

5.3.1 Initial analysis.

Table 7 presents the initial analysis of CSR disclosure in relation to firm value. The analysis was performed on 150 (N = 150) companies. The variable *CSRreport* was used to represent CSR disclosure, and was not a variable of interest in the research. However, CSR assurance does not exist if the company does not disclose. Therefore, the companies in the sample were assessed for disclosure first, which provided the basis for the *ASSURANCE* check. *CSRreport*, is a dummy variable, where a score of one indicated that the firm disclosed environmental and social information, a score of zero otherwise (Table 4)**.** Disclosure did not need to be in a fully dedicated, stand-alone report. It was also accepted when it appeared as a part of a company's annual report or as environmental and social information on the company's website.

Panel A in Table 7 shows the regression of the effect of *CSRreport* on the variable *MarketCap*. Panel A shows that *CSRreport* is negative and insignificant ($p > .10$). When *ASSURANCE* was added, panel B shows that *CSRreport* remains negative and insignificant ($p > .10$), while *ASSURANCE* is positive and significant ($p < .01$). The two panels together show that although CSR disclosure does not seem to affect *MarketCap*, the market response to the signal of assurance is positive and significant in the current study's sample. This result is consistent with the vast amount of literature describing the lack of confidence in CSR disclosure (Brown-Liburd et al., 2012; Brown-Liburd & Zamora, 2015; Hodge et al., 2009). In addition, the result is consistent with the idea that disclosure itself is not sufficient to affect investors' perceptions and their willingness to invest in buying more shares from the company (Brown-Liburd et al., 2012; Brown-Liburd & Zamora, 2015). Assurance, on the other hand, tended to have a significant positive impact on *MarketCap*. The analysis in Table 7 was carried out as a preliminary

analysis; however, the focus of the remainder of the analyses was to examine the effect of *ASSURANCE* on firm value, as measured by *MarketCap*. The variable *CSRreport* was not used in the subsequent analyses.

A comparison between the means for companies that provided CSR assurance and the means for companies that did not provide assurance, revealed that there is a difference in *MarketCap* (t[36] = 4.041; $p < .01$), between companies that adopted assurance (M = 32,098.309; SD = 38,933.169), and those that did not adopt assurance (M = 5,771.597; SD = 4,936.387), with companies that adopted assurance experiencing higher *MarketCap*. This initial analysis provided support for performing the next step, regression analysis.

5.3.2 Main analysis.

Table 8 presents the results for Model 1. The analysis includes only companies that issued a CSR report (i.e., *CSRreport* = 1), which was a total of 110 (N = 110) companies. However, due to missing control variables, N reduced to 104 companies. Table 8 shows that *ASSURANCE* is positive and very significant ($p < .01$). Therefore, H_1 is supported. In addition, *ASSURANCE* increases firm value when measured in *MarketCap*. The model is significant ($p < .01$), yields a high F-statistic (F = 25.02) and yields a very high R^2. Table 8 shows (R^2 = .70) which indicates that 70% of *MarketCap* variation can be explained by the model employed. All variables in Table 8 behave as predicted in Chapter 4, "Research Methods", and most of them are significant. For example, key variables *SIZE*, *TOBIN Q* and *STOCKTURN* are significant ($p < .01$). The variable *LEV* is also significant ($p < .05$). In addition, *VOLAT* and *INTANG* are significant ($p < .10$).

Table 7
Results from Ordinary Least Squares (OLS) Regression Examining the Effects of Corporate Social Responsibility (CSR) Disclosure and Assurance on Market Capitalisation

	Panel A *MarketCap*		Panel B *MarketCap*	
	Coefficients	*P*-values	Coefficients	*P*-values
Constants	–84,249.915	***.000	–80,640.380	***.000
CSRreport	–3,367.143	.319	–4,723.841	.156
ASSURANCE (+)			9,531.452	***.004
SIZE	12,418.475	***.000	11,257.978	***.000
ROA	17,598.638	.313	14,712.859	.386
TOBIN Q	4,384.874	***.000	4,362.325	***.000
LEV	–19,476.665	**.042	–16,302.844	*.081
CAPEX	29,501.032	.238	18,239.882	.458
VOLAT	–2,259.085	.886	2,705.930	.861
STOCKTURN	–9,062.569	***.008	–9,006.880	***.007
INTANG	8,482.707	.146	9,466.801	*.097
DIVIDEND	–7,727.169	.150	–4,222.925	.429
N	142		142	
Model *F*-stat	25.417	***.000	25.174	***.000
Adjusted R^2	.634		.654	

General note. The total sample was 142 companies (N = 142) due to missing control variables, represented as °.
Probability notes. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5%, and 1% levels, respectively, all two-tailed, except for *ASSURANCE*.

Table 8
Results from Ordinary Least Squares (OLS) Regression Examining the Effect of Assurance on Market Capitalisation

		MarketCap	
	Expected value signs	Coefficients	*P*-values
Constant	?	–116,565.869	.000
ASSURANCE	(+)	8,718.277	***.008
SIZE	(+)	12,976.506	***.000
ROA	(+)	26,701.203	.219
TOBIN Q	(+)	5,703.840	***.002
LEV	(–)	–20,008.066	**.033
CAPEX	(+)	19,419.825	.264
VOLAT	(+)	33,062.872	*.072
STOCKTURN	(–)	–11,114.261	***.004
INTANG	(+)	10,235.113	*.078
DIVIDEND	(+)	4,788.713	.275
N		104	
Model *F*-stat		25.021	***.000
Adjusted R^2		.700	

General note. Although the full sample included 110 companies (*N* = 110), missing values for some control variables, represented as °, reduced the total sample pool to 104 companies (*N* = 104).
Probability note. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5%, and 1% levels, respectively, all one-tailed, except for the constant.

In the subsequent analysis (Table 9), the number of companies dropped to 36 (*N* = 36) to represent the number of companies that adopted assurance. Panel A in Table 9 presents the regression of *MarketCap* as the dependent value when *AssurQuality* is used as an independent variable. This regression was conducted to investigate H_2. Higher *AssurQuality* was hypothesised to affect firm value positively. The results in Panel A show that *AssurQuality* is not, in fact, significantly related to *MarketCap* ($p > .10$). This result indicates that H_2 is, in fact, not supported by the evidence. Even though the results failed to support H_2, they appear to be consistent with signalling theory in justifying the effect of assurance; furthermore, they suggest that it is not the actual quality of the assurance statement that matters. Investors may be aware of the standards *AA1000 AS* and *ISAE3000*, but may not possess the required knowledge and the thorough understanding of the standards required to conduct a comprehensive analysis of assurance quality. Therefore, aspects taken into consideration in the *AssurQuality* score may not receive any attention by actual report users (investors, in this instance). Karjalainen (2011) argued that it is perceived quality that affects credibility, not actual quality. In this regard, Karjalainen (2011) prompted the consideration of certain aspects of assurance quality that are likely to affect investors' perceptions positively. These added aspects included the variables *Level of Assurance*, *Assurance Provider Profession* and *Big Four.*

Hypothesis 3 (H_3) suggests that higher *Level of Assurance* is an aspect of higher quality, and that it has a positive contribution to firm value. Panel B (Table 9) shows that reasonable assurance increases firm value but is not significant ($p > .10$). Therefore, H_3 is not supported.

Panel C presents the results related to H_4. The variable *Assurance Provider Profession* affects quality, and hence, it is likely to contribute firm value. Panel C (Table

9) shows a positive coefficient when an accountant provides assurance services. However, this result lacks statistical significance ($p > .10$). Therefore, H_4 is not supported.

Hypothesis 5 (H_5) examines the effect of assurance when it is provided by a Big Four accountant. The results (not tabulated) are exactly the same as the results showing in Panel C (Table 9). Therefore, H_5 is not supported. This is because all accounting assurance providers in the sample were Big Four accountants. The sample represented the largest companies only; these companies enjoy the highest liquidity in New Zealand and Australia. Therefore, it was expected that they would choose only Big Four accountants for assurance services. Indeed, previous research has shown that firms more visible in the capital market tend to engage with highly reputable auditors (Barton, 2005).

To alleviate the concern that the models used in Table 9 were over-fitted for a sample of 36 companies, the model was reduced to include the variables of interest (*AssurQuality*, *Level of Assurance* and *Assurance Provider Profession*). Two predictors appear to be the most significant predictors in all panels (Table 9). These predictors are *SIZE* and *STOCKTURN*. The results did not change (not tabulated) with model reduction. The variables *AssurQuality*, *Level of Assurance* and *Assurance Provider Profession* all remained insignificant ($p > .10$).

5.3.3 Regression analysis summary.

Overall, only H_1 is supported, where the CSR assurance signal seems to be value-relevant. All other aspects of assurance quality do not seem to be value-relevant, and the secondary hypotheses (H_2, H_3, H_4 and H_5) are not supported.

Table 9
Results for Ordinary Least Squares (*OLS*) *Regression Examining the Effects of Various Measures of CSR Assurance Quality on Market Capitalisation*

	Panel A		Panel B		Panel C	
	MarketCap		*MarketCap*		*MarketCap*	
	Coefficients	*P*-values	Coefficients	*P*-values	Coefficients	*P*-values
Constant	–156,083.955	***.005	–131,601.896	***.001	–143,893.859	***.000
AssurQuality (+)	–7,338.442	.354				
Level of Assurance (+)			1,490.137	.444		
Assurance Provider Profession (+)					7,366.053	.192
SIZE (+)	17,379.631	***.000	15,397.055	***.000	15,243.198	***.000
ROA (+)	72,851.125	.315	–23,356.356	.403	9,002.383	.464
TOBIN Q (+)	15,221.306	*.091	16,254.050	.083	16,454.565	*.064
LEV (–)	–29,116.691	.176	–29,983.909	.166	–26,953.100	.188
CAPEX (+)	100,890.546	.127	123,473.717	.063	114,446.775	*.075
VOLAT(+)	69,444.848	.204	69,836.945	.164	75,656.281	.137
STOCKTURN (–)	–25,474.565	**.024	–28,344.279	***.007	–26,886.597	***.009
INTANG (+)	–4,808.953	.431	–15,457.454	.273	–16,407.246	.254
DIVIDEND (+)	–640.014	.485	–736.315	.482	3,783.784	.409
N	36		36		36	
Model *F*-stat	13.246	***.000	13.108	***.000	13.584	***.000
Adjusted R^2	.778		.776		.782	

General note. The total sample of 36 companies (*N* = 36) represents the number of companies that adopted assurance.
Probability note. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5% and 1% levels, respectively, all one-tailed, except for the constant. The total sample of 36 companies (*N* = 36) represents the number of companies that adopted assurance.

5.4 Determinants of Assurance Quality

The results presented in this section relate to Model 2. The aim of creating Model 2 was to identify the factors that determine assurance statement quality. Table 10 presents the results from the regression of the assurance quality score obtained from content analysis. The main attributes of quality were included as factors that contributed to quality (*Level of Assurance* and *Assurance Provider Profession*). Control variables were also included in the analysis.

5.4.1 Analysis of Model 2.

Panel A in Table 10 shows regression results when *Level of Assurance*, *Assurance Provider Profession* and the control variables are included in the model; these variables were selected following the methodology of Zorio et al. (2013). The *Level of Assurance* is positive but insignificant ($p > .10$). However, when *Assurance Provider Profession* indicated that an accountant had performed the assurance service, the effect on assurance quality is significantly negative ($p < .10$). Consistent with prior literature, *Level of Assurance* was expected to have a positive impact on *AssurQuality*, because investors and report users associate reasonable level of assurance with higher quality, which skews their perceptions of assurance statements in the positive direction (Coram et al., 2009; Hodge et al., 2009; Pinsker & Wheeler, 2009). Available literature on this subject yielded inconclusive results and opinions about whether accountants or environmental specialists provided higher assurance quality (Ball et al., 2000; Hodge et al., 2009; O'Dwyer & Owen, 2005; Perego & Kolk, 2012). However, it appears that in the present sample, accountants reduced *AssurQuality.*

Table 10
Regression of Assurance Quality Determinants

	Panel A *AssurQuality*		Panel B *AssurQuality*		Panel C *AssurQuality*	
	Coefficients	*P*-values	Coefficients	*P*-values	Coefficients	*P*-values
Constants	–0.378	.207	–0.223	.370	–0.223	.387
SIZE	0.053	***.005	0.041	***.005	0.040	***.009
ROA	0.779	.186	1.651	***.001	1.661	***.002
LEV	0.485	*.091	0.047	.841	0.049	.842
Level of Assurance	0.107	.582			0.007	.936
Assurance Provider Profession	–0.163	*.066			0.010	.897
Use of AA1000 AS			0.309	***.000	0.313	***.001
N	36		34		34	
Model *F*-stat	4.083	***.006	7.526	***.000	4.681	***.002
Adjusted R^2	0.306		0.442		0.401	

General notes. All predictors used were collected in the same year as assurance. A total of 36 companies (*N* = 36) assured their corporate social responsibility (CSR) information.
Specific notes. Assurance Provider Profession was coded as accountant = 1, environmental specialist = 0. In panels B and C, only 34 companies were sampled (*N* = 34), because two assurance statements used a combination of both standards, so they were excluded from this analysis.
Probability note. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5% and 1% levels, respectively, all two-tailed.

The control variables used in Model 2 were *SIZE*, *ROA* and *LEV*. *SIZE* is significant and positive ($p < .01$). *LEV* is also positive and significant ($p < .10$). *ROA* is positive but insignificant ($p > .10$). It appears that larger firms possessing larger proportions of assets tend to produce higher quality assurance statements. This may suggest that more visible firms attract better assurance providers, who then provide higher assurance quality (Zorio et al., 2013). Another possible explanation is that larger firms have the power to negotiate for higher assurance quality, and are willing to pay a higher cost to obtain higher quality assurance, because they are often under strict public scrutiny.

Interestingly, higher debt in the capital structure is associated with higher quality in the current sample. This may suggest that firms with a larger debt proportion in their capital structure may aim to provide higher assurance quality. This may be due to pressure from debtholders and investors, who may require higher accuracy and credibility to compensate for their higher levels of investment risk (Ahn et al., 2006; Blackwell et al., 1998; Degryse & De Jong, 2006). It makes sense that debtholders and investors would seek higher disclosure quality; therefore, they would also require higher quality assurance.

5.4.2 Could the assurance quality score be biased?

Although discussion in the literature about which category of assurance providers deliver higher quality was inconclusive, some studies documented higher quality when assurance was performed by an assurance provider from the accounting profession, as opposed to consultants and environmental specialists (Hodge et al., 2009; Perego & Kolk, 2012; Zorio et al., 2013). The results shown in Table 10, panel A contradict the expectation proposed by H_4, that *AssurQuality* should increase when the assurance provider is an accountant. This contradiction could be due to accountants' inherent

caution in expressing their opinion, which often leads to less informative and more concise assurance statements, as opposed to environmental specialists (consultants), who seem to provide more elaborate and informative recommendations and conclusions (Perego & Kolk, 2012). Furthermore, consultants often rely on *AA1000 AS* for an assurance engagement, where they score higher than accountants do in *Materiality*, because they often provide detailed descriptions of material issues.

This scenario also applies to other two principles contained in the *AA1000 Assurance Principles Standard* (*AA1000 APS*), which are inclusivity and responsiveness to stakeholders (Perego & Kolk, 2012). Environmental Specialists (consultants) also score higher in these two principles. Accountants sometimes follow the *AA1000 AS*, however, but they tend to rely more on related accounting- and auditing-driven standards (the *ISAE3000*). This disparity motivated further research on the question of whether higher *AssurQuality* scores were associated with the standards used rather than the *Assurance Provider Profession* or the *Level of Assurance* provided. Panels B and C in Table 10 show that the *Use of AA1000 AS* standards is positive and significant ($p < .01$), which suggests that quality appears to be dependent on the *Use of AA1000*. This result is also consistent with the finding that accountants in the current sample seemed to provide a lower quality of assurance, because they tended to rely on the *ISAE3000* exclusively. In contrast, environmental consultants preferred the *AA1000 AS*.

This disparity raises concerns about the content analysis approach. The content analysis approach followed in the current study is based on Perego and Kolk (2012), which in my opinion, favours *AA1000 AS* over any other set of standards for assurance. This preference can be clearly inferred from the emphasis placed on the three *AA1000 APS* (materiality, stakeholder inclusivity and responsiveness). To alleviate concerns about the content analysis approach and to understand the reason that accountants seem

to reduce quality, the quality score in the current research was therefore adjusted to exclude main content criteria relying on the *AA1000 AS* principles that caused higher assurance scores. These content criteria correspond to the three assurance principles: stakeholder inclusivity, responsiveness and materiality, which represent items 16 ,17, 18 in Table 3.

Table 11 shows the regression results for *Adjusted AssurQuality*; results indicate that *Level of Assurance* is an insignificant factor in determining *Adjusted AssurQuality*. The variable *Assurance Provider Profession* is insignificant ($p > .10$), suggesting that accountants do not reduce quality when the effects of the *AA1000* are excluded. The insignificant result also confirms that previous scores were biased towards the *AA1000*, which makes environmental specialists and consultants appear to provide slightly better *AssurQuality*.

Prior literature has also suggested that assurance providers tend to use a combination of standards and guidelines when engaging in assurance, rather than relying on one set of standards (Perego & Kolk, 2012). This was perceived by previous researchers as a factor that could improve assurance quality (Perego & Kolk, 2012). However, since only two assurance statements used a combination of assurance standards in the current study, any results derived from this test were unlikely to be reliable; therefore, the use of a combination of assurance standards could not be adequately tested.

5.4.3 How the use of *AA1000 AS* affects firm value.

Finding that *Use of AA1000 AS* was an important determinant of *AssurQuality* encouraged the investigation of the effect on firm value of using the *AA1000 AS*. However, Table 12 shows that *Use of AA1000 AS* was insignificant ($p > .10$), similar to the other aspects of quality. Reducing model parameters to include only significant

predictors, which were *SIZE* and *STOCKTURN*, did not change the significance of the results.

5.4.4 Summary of results.

The results from the analyses suggested that assurance quality scores favour the *AA1000 AS*, and this is the reason accountants appeared to produce lower quality assurance statements. When this effect was removed, no difference in quality between accountants' and environmental specialists' outputs was observed, and assurance quality was not affected by the profession of the assurance provider.

Table 11
Regression of Adjusted Assurance Quality Determinants

	Adjusted AssurQuality	
	Coefficients	*P*-values
Constants	0.0436	.315
SIZE	0.010	**.021
ROA	0.132	.294
LEV	0.108	*.080
Level of Assurance	0.028	.104
Assurance Provider Profession	–0.024	.196
N	36	
Model *F*-stat	4.083	**.024
Adjusted R^2	.227	

General notes. All predictors used were collected in the same year as assurance. A total of 36 companies (*N* = 36) assured corporate social responsibility information. However, the total sample (*N* = 34) was only 34 companies, because two companies were excluded from the analysis due to their use of more than one standard to prepare their reports.
Specific note. *Assurance Provider Profession* was coded as accountant = 1, environmental specialist = 0.
Probability note. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5% and 1% levels, respectively, all two-tailed.

Table 12
Results for Ordinary Least Squares (OLS) Regression When the Use of AA1000 Assurance Standards was Added to the Model to Predict Firm Value

	MarketCap	
	Coefficients	*P*-values
Constants	–123,697.222	***.007
Use of AA1000 AS (+)	–3,829.011	.353
SIZE (+)	14,936.000	***.000
ROA (+)	–39,208.620	.351
TOBIN Q (+)	17,890.599	*.061
LEV (–)	–30,494.756	.171
CAPEX (+)	124,997.106	*.080
VOLAT (+)	66,414.382	.196
STOCKTURN (–)	–29,927.244	**.020
INTANG (+)	–19,778.176	.229
DIVIDEND (+)	–1,833.229	.456
N	34	
Model *F*-stat	12.066	***.000
Adjusted R^2	.770	

General note. Originally, the total number of companies who assured their corporate social responsibility (CSR) information comprised 36 ($N = 36$) corporations. However, two companies ($n = 2$) were excluded from the sample because their statements relied on a combination of standards, resulting in a final sample size of 34 ($N = 34$) companies.
Probability note. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5% and 1% levels, respectively, all one-tailed, except for the constant.

5.5 Supplementary Analysis

5.5.1 Controlling for CSR performance, country and industry effects.

A plethora of scholars have suggested that CSR performance is linked to financial performance (Callan & Thomas, 2009; Clarkson et al., 2013; Clarkson et al., 2008; Dhaliwal et al., 2011, 2014; Dhaliwal et al., 2012; El Ghoul, Guedhami, Kwok, & Mishra, 2011; Plumlee et al., 2015). Hence, it was essential to control for CSR performance in the current study. Following Cahan's et al. (2015) ESG scores were obtained from Bloomberg. "Bloomberg ESG data captures standardised cross-sector and industry specific metrics, including more than 170 fields that collectively cover, environmental, social and governance performance" (Cahan et al., 2015, p. 24). Indeed, Bloomberg rely on companies' reports as the main source to generate ESG ratings, but complements the assessment with formal and informal sources of information, such as evaluations by the United Nations and media reports (Cahan et al., 2015). Therefore, the ESG score captures overall CSR performance.

The ESG disclosure score included a governance disclosure score, which is not a component that was of interest in this study. Therefore, this complication required that the ESG score be split into two separate parts, the environmental score (*E*) and the social score (*S*). The governance score was thereby excluded from the analysis, because it was not part of the CSR reports. In fact, governance is often included in annual reports and is audited as part of the financial auditing process. Governance is also mandated and regulated, and it is not voluntary. The focus of this dissertation, however, was on voluntary disclosures; hence, it was a logical step to exclude governance.

5.5.2 Additional variables used in the supplementary analysis.

The following variables were additional variables not included in the main analysis. Rather, they were used to provide a supplementary analysis that performed the function of controlling for CSR performance.

EnvironPerf represented the environmental disclosure score taken from Bloomberg, which was defined as a "proprietary Bloomberg score based on the extent of a company's environmental disclosure as part of environmental, social and governance (ESG) data". The score ranges from 0.1 to 100. Companies that disclosed the minimum amount of environmental data received a score of 0.1, while a full score of 100 was given to those who met all the requirements, as stipulated by Bloomberg. Different weightings were assigned to each data point, based on relative importance. The highest weight was given to greenhouse gas emissions. Some companies did not disclose any environmental information and therefore had no score assigned; these corporations rated as "not applicable (N/A)". Companies that were not covered by Bloomberg as part of the ESG group also received the N/A designation.

In the total sample collected, many companies showed an N/A rating. For companies where evidence was found that they were disclosing information but where Bloomberg awarded a rating of N/A, I have replaced N/A with the score received in the prior financial year, because this score was unlikely to have changed dramatically from one year to another. In some cases, no ESG data were gathered for the company at all. Due to the unavailability of any score for the company, companies with a rating of N/A for the last 5 years were considered to be "missing" from the sample. Overall, 39 (N = 39)companies were considered to be missing from the *EnvironPerf* score.

SocialPerf represents a social disclosure score, and is defined by Bloomberg as a "proprietary Bloomberg score based on the extent of a company's social disclosure as part

of Environmental, Social and Governance (… ESG [punctuation mine] data". Similar to *EnvironPerf*, the score ranges from 0.1 to 100. This wide range allowed differentiation between minimum and maximum disclosure (minima and maxima). Some companies received an N/A rating for *SocialPerf* for the same reasons described in the paragraph above about *EnvironPerf*, and they were treated in a similar fashion. Overall, 30 companies (N = 30) were considered to have *SocialPerf* missing (N/A) from their CSR reporting. The score was weighted; a higher weighting was given to workforce-type data relative to other disclosures. The scores accounted for all industry differences across sectors. Each company was evaluated based on the disclosure items relevant to its industry.

In the current study, the variable *E&SPerf* was defined as the average of *EnvironPerf* and *SocialPerf*. It was utilised to examine the combined effects of social and environmental disclosure and performance.

5.5.3 Industry effects.

As the companies in the sample come from different industries, it was vital to consider industry sensitivity effects in the current analysis. Prior literature has distinguished between environmentally and socially sensitive industries and non-environmentally or socially sensitive industries (Cahan et al., 2015; De Villiers & Van Staden, 2011; Simnett et al., 2009). Following the reasoning of De Villiers and Van Staden (2011) and Cahan et al. (2015), the current analysis tested for industry effects. This was an essential step required for examining whether results were driven primarily by environmentally and socially sensitive industries, or if the results remained true once industry effects were removed from the equation. Sensitive industries include those business activities that have " pronounced environmental or social impacts" (Cahan et al.,

2015, p. 28). According to Simnett et al. (2009), some industries are exposed to higher social and environmental risks. Therefore, the need for improving report users' confidence is higher for those industries (Simnett et al., 2009).

The industry classification used in this study was the *Global Industry Classification Standard* (*GICS*), and it was obtained from Bloomberg. Based on Simnett et al.'s (2009) classification, the industries in the sample were classified into two groups: 1) environmentally and socially sensitive industries, and 2) non-environmentally and socially sensitive industries. Environmentally and socially sensitive industries were considered to be mining, utilities, industrials and finance (Simnett et al., 2009). The classification system used in the present research was modelled on the system used by Simnett et al. (2009), but some changes were made, based on changes in *GICS* classification. The most recent GICS classification includes ten sectors, which are: 1) energy, 2) materials, 3) industrials, 4) consumer discretionary, 5) consumer staples, 6) health care, 7) financials, 8) information technology, 9) telecommunication services and 10) utilities. The current sample included companies from all 10 sectors. Furthermore, five sectors (the materials, energy, industrials, utilities and financial sectors) were considered to be environmentally and socially sensitive industries. The other five sectors (consumer discretionary, consumer staples, health care, information technology and telecommunication services) were considered to be non-environmentally and non-socially sensitive industries. In the current research, *INDUSTRY* was treated as a dummy variable, where a score of one represented environmentally and socially sensitive industries, a score of zero otherwise.

The sample used in the present study was drawn from New Zealand- and Australia-domiciled companies. Australian companies formed the biggest proportion of the sample (67%). Therefore, it was essential to control for country effect to examine if

the results from the sample were driven mainly by the fact that most of the companies in the sample were from a particular country, in this case Australia. *COUNTRY* was therefore set as a dummy variable, where a score of one represented Australia, and a score of zero represented New Zealand. This variable was added to the model in the supplementary analysis. It was used to examine whether Australia had a dominant effect on the results, as 100 (n = 100) of the 150 (N = 150)companies in the sample were Australian in origin.

Table 13 shows how MarketCap reacted to the application of the ASSURANCE and EnvironPerf variables (Panel A), the SocialPerf variable (Panel B) and the combined effect of the E&SPerf variable (Panel C). Table 13 shows results from analyses in which different measures of CSR performance were used. Results from analyses that included industry sensitivity and country effects are shown in all panels. All panels illustrate that ASSURANCE remains positive and significant ($p < .10$), while EnvironPerf, SocialPerf and E&SPerf were insignificant ($p > .10$). COUNTRY and INDUSTRY sensitivity remain insignificant in all panels ($p > .10$). These results confirm that results obtained in the current study relating to the assurance signal remain robust when industry sensitivity and country effects are removed.

5.5.4 Supplementary analysis summary.

In summary, assurance signal seems to have had a positive impact on firm value when measured in *MarketCap*. Corporate social responsibility performance measures, industry effects and country controls did not drive results and did not negate the effect of assurance. Hypothesis 1 (represented as H_1) therefore remains supported

Table 13
Sensitivity Analysis for Social and Environmental Performance, Country and Industry Effects

	Panel A *MarketCap*		Panel B *MarketCap*		Panel C *MarketCap*	
	Coefficients	*P*-values	Coefficients	*P*-values	Coefficients	*P*-values
Constants	–122,268.099	***.000	–125,616.862	***.000	–124,265.217	***.000
ASSURANCE (+)	6,002.303	.066*	6,358.346	*.060	5,540.214	*.089
SIZE (+)	13,308.708	***.000	13,461.979	***.000	13,292.041	***.000
ROA (+)	33,778.382	.177	39,981.877	.144	39,294.658	.144
TOBIN Q (+)	5,218.107	***.006	4,874.290	**.010	4,944.282	***.009
LEV (–)	–20,304.660	*.058	–18,771.408	*.058	–19,279.870	*.052
CAPEX (+)	53,039.225	.142	40,699.122	.142	45,065.659	.112
VOLAT (+)	–9,330.550	*.061	–9,676.317	*.063	–9,681.270	*.061
STOCKTURN (–)	36,785.512	**.026	36,561.682	**.023	36,615.595	**.022
INTANG (+)	11,918.744	*.070	11,594.294	*.077	11,797.390	*.072
DIVIDEND (–)	5,662.713	.242	5,442.616	.251	5,634.886	.243
EnvironPerf	19,589.862	.140				
SocialPerf			16,206.709	.249		
E&SPerf					22,801.529	.137
COUNTRY	–4,632.172	.500	–3,548.069	.605	–4,164.583	.543
INDUSTRY	–1,753.533	.665	–1,326.663	.746	–1,412.888	.728
N	101		101		101	
Model *F* stat	19.946	***.000	19.687	***.000	19.946	***.000
Adjusted R^2	.711		.708		.711	

General note. The total sample comprised 101 companies only ($N = 101$), due to missing variables.
Probability notes. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5%, and 1% levels, respectively, all two-tailed, except where a sign (±) is indicated.

5.6 Independence and Assurance Quality

An additional sensitivity test was conducted to investigate if the assurance provider's independence affected assurance. As indicated in Chapter Two, the "Literature Review", the independence of assurers can be compromised because of restrictions imposed by company managers (O'Dwyer & Owen, 2005; Pinsker & Wheeler, 2009). In the auditing literature, independence received significant attention, specifically after Enron's case (Tepalagul & Lin, 2015) Enron scandal shows how the lack of independence and inappropriate governance mechanisms can lead to major collapses.

The Enron case motivated the current investigation into whether independence affects assurance quality. Clearly, based on the events that led to the Enron collapse, independence can be a concern, especially when the assurance provider is also the financial auditor. In addition, it is difficult to define and guarantee independence. The auditor's independence is related to their ability to remain objective and to withstand a client's pressure to resort to substandard reporting (DeFond, Raghunandan, & Subramanyam, 2002). There are additional concerns about the independence of an auditor who also provides non-audit services (Ashbaugh, LaFond, & Mayhew, 2003; DeFond et al., 2002; Tepalagul & Lin, 2015). Of course, increased fees received by auditors from the client increase the financial dependence of the auditor on the client. This is likely to render the auditor unwilling to stand against management pressure or to combat substandard reporting pressures due to the fear of losing business (Ashbaugh et al., 2003; DeFond et al., 2002; Tepalagul & Lin, 2015).

For this reason, a variable to measure the independence of the CSR assurance provider was developed. Although both sets of standards (the *AA1000 AS* and the *ISAE3000*) mention independence, the term not clearly defined by a set of rules. The

content analysis rule followed in this research, however, considers the assurance provider to be independent from the firm commissioning the assurance service, based on any statement of independence visible in the assurance document (Table 3). Although all statements obviously meet the independence criterion (Table 3), real independence is difficult to define and guarantee. When the assurance provider is the financial auditor of the firm's financial report, achieving independence is highly unlikely.

Therefore, in the current research, I developed a variable to check whether the assurance provider and the financial auditor were one in the same for companies represented in the sample. If the financial auditor and assurance provider were found to be the same person/provider, then this variable equaled zero. If they were found to be different, then the assurance provider was considered independent and the score was one. Table 14 illustrates that *Independence* is insignificant, whether it is combined with *Level of Assurance*, the *Assurance Provider Profession* as in Panel A, or is used separately with the control variable in Panel B. In fact, the inclusion of *Independence* in the model results in lower R^2 values and low *F*-statistics, which suggests that the model has less explanatory power than the models illustrated in Table 10. In fact, the results shown in Panel A and B of Table 14 are consistent with those of Ashbaugh et al. (2003), who found no evidence of any effect of non-audit services on the association between independence and the audit quality. Other results from the literature suggest that evidence about any association between independence and audit quality (when auditors are engaged in non-audit services) is mixed, but that it is widely accounted for as a concern (Tepalagul & Lin, 2015).

Independence as a concept is closely related to the governance mechanisms employed by the firm. Researchers in the field are concerned about such governance mechanisms becoming compromised during the assurance process (Ball et al., 2000;

O'Dwyer & Owen, 2005; Pinsker & Wheeler, 2009). Indeed, the inclusion of sustainability officers on the board of directors has an effect, causing boards to adopt assurance (Peters & Romi, 2015). Occasionally, assurance also serves to alleviate concerns about managerial pay (Brown-Liburd & Zamora, 2015). These are all reasons to suggest that there is an interaction between assurance quality and a corporation's existing governance mechanisms. Therefore, Bloomberg governance disclosure score has been used in the current research as an approximation of the governance mechanism employed by the firm and has been added to the model as a determinant of *AssurQuality*. Panel C in Table 14 shows that *governance* is, in fact, a significant factor in determining *AssurQuality*.

5.6.1 Summary of independence

The analysis in section 5.6 shows that governance mechanisms are an important factor in determining CSR assurance quality. However, independence does not seem to be an important factor. This could be due to the specific measure of independence used in this analysis. However, this unexpected result does not negate the importance of the assurance providers' independence. Future research may use another measure of independence, which could prove to be significant.

Table 14
Regression Analysis to Determine the Effects of Independence and Governance on Assurance Quality

	Panel A *AssurQuality*		Panel B *AssurQuality*		Panel C *AssurQuality*	
	Coefficients / *P*-values		Coefficients / *P*-values		Coefficients / *P*-values	
Constants	0.041	.406	0.026	.555	–0.138	.119
SIZE	0.009	**.035	0.009	**.039	0.005	.309
ROA	0.138	.29	0.201	.108	0.105	.458
LEV	0.128	*.064	0.129	*.062	0.137	*.052
Level of Assurance	0.029	.211			0.014	.299
Assurance Provider Profession	–0.02	.227			–0.038	*.082
Independence	–0.003	.45	0.005	.395		
Governance					0.406	**.013
N	36		36		36	
Model *F*-stat	2.477	**.048	3.089	**.030	4.023	***.005
Adjusted R^2	.207		.197		.348	

General notes. All predictors used were collected in the same year as assurance. A total of 36 companies ($N = 36$) assured their corporate social responsibility (CSR) information.
Probability note. *P*-values preceded by *, ** and *** represent significance levels at the 10%, 5%, and 1% levels, respectively, all two-tailed.

Chapter Six: Conclusion

6.1 Summary of Results

6.1.1 Value relevance of assurance.

Based on the discussion of the results from Chapter Five, it seems that CSR disclosure does not increase firm value, whereas CSR assurance significantly increases firm value. This result supports the assumption that the signalling effect of assurance is, in fact, observed by market participants. Furthermore, assurance quality does not seem to have an impact on firm value. This could be due to the fact that market participants and investors do not pay attention to the quality of CSR assurance, the level of assurance or the assurance provider's profession.

The assurance signal results hold even after controlling for CSR performance, country and industry effects. In fact, the current study's results are consistent with signalling theory, which posits that the market responds to the signal communicated through assurance about the quality of CSR disclosure. The signal attains the indented effect, and the receivers of the signal (investors and other market participants) respond accordingly by demanding company shares, because they perceive the company as more credible and trustworthy.

Regardless of the large amount of published literature touting the importance of CSR assurance quality in today's marketplace, no evidence was found in the current study that assurance quality affects firm value. Similarly, neither the level of assurance nor the assurance provider's profession appeared to affect firm value. All the accountant assurance providers examined in the current research were from Big Four accountancy firms, which did not allow the researcher to test if there was any observable difference

between the assurance quality provided by Big Four accountants versus non-Big Four accountants.

The results from the analysis in Chapter five were obtained by adapting previously mooted experimental design concepts, thus supporting their validity. In fact, current results indicate that assurance as a signal has an influence on report users' and investors' perceptions, and therefore affects their judgements.

However, mixed evidence emerged regarding which aspects of assurance quality are more relevant. Results for assurance level and assurance provider type from the literature are also mixed, which could explain why no significant results were obtained in the present research. Contradictory results in general may be due to investors' varying awareness levels of assurance quality aspects and their general lack of knowledge about assurance standards. Studies available to this date do not measure the level of knowledge about assurance standards. Level of knowledge, cognition (Daniel et al., 1998) and investors' views on social and environmental matters (Dilla et al., 2014; Kanter, 2011) are factors that play an important role in the decision-making process; therefore, these social constructs also affect whether investors include CSR assurance in their decision-making processes.

Table 15 provides an overall summary of how the present research responds to the two questions (RQ_1 and RQ_2) addressed earlier in Chapter Three, "Theoretical Framework and Hypotheses Development". CSR assurance is value-relevant and increases firm value, but the quality of assurance does not seem to affect share prices.

Table 15
Summary of Results

Hypotheses	Description	Correlation tests	Regression tests	Additional tests	Findings
H_1	CSR assurance increases firm value	Table 6	Table 7, 8	Table 13	Accept H_1
H_2	Higher assurance quality leads to higher firm value	Table 6	Table 9		Reject H_2
H_3	Reasonable level of assurance leads to higher firm value		Table 9		Reject H_3
H_4	Assurance produced by an accountant increases firm value		Table 9		Reject H_4
H_5	Big Four accountant increases firm value		Table 9		Reject H_5

General notes. Correlation and regression tests were used to test all five hypotheses. "H" denotes hypothesis, and the subscripted number denotes the order of the hypotheses as they are presented in this dissertation. H_1 relates to RQ_1 and H_2 - H_5 related to RQ_2.

6.1.2 Determinants of CSR assurance quality.

Determining the factors that affect CSR assurance quality was not required to meet any of the hypotheses listed in Table 15, but the delineation did provide an insight into the factors that contributed to CSR assurance quality in the current sample. The results from this enquiry show that accountants seem to reduce the overall quality of the assurance statement, while the level of assurance does not affect the quality. Finding that accountants reduce the quality of assurance confirms the results from prior studies, which also indicate that there is a difference in assurance quality depending on the assurance provider's profession, and that accountants produce lower quality assurance statements.

It appears that accountants, environmental specialists and consultants rely on different sets of standards when providing their services. According to Perego and Kolk (2012) and in agreement with the findings of the present study, it appears that consultants prefer to work with the *AA1000 AS*, while accountants prefer to follow the auditing- and accounting-driven standards of the *ISAE3000*.

The content analysis procedure followed in this study to obtain assurance quality scores favours the *AA1000 AS*, because content criteria are based mainly on *AA1000 AS* requirements. Therefore, the assurance quality model adopted for the current research from Zorio et al. (2013) was adapted to include the use of *AA1000 AS*. Using the *AA1000 AS* appeared to be a significant factor in determining assurance quality, but its use failed to increase firm value, just as other quality attributes failed. In the present study, a measure of governance disclosure score was added to the model in response to concerns voiced in previous research about a distinct lack of independence. Based on the current study's conclusions, it is clear that higher quality governance mechanisms result in higher CSR assurance quality.

6.2 Contributions and Research Implications

The current study contributes to the literature about CSR assurance by investigating the value relevance of CSR assurance and its quality. It also contributes to the literature by investigating CSR assurance quality in Australia and New Zealand, two countries that have rarely been examined. Most importantly, the current study offers an improved measure of CSR assurance quality that includes governance as a determinant of assurance quality.

The present study has implications for companies that are considering CSR assurance, assurance providers and investors. Many firms that are currently hesitant to adopt assurance may benefit from assuring their CSR reports. The results from this study are consistent with findings from Casey and Grenier (2015), who found that CSR assurance reduces the cost of equity capital and that accounting assurance providers amplify the benefits of assurance. However, the present study shows that engaging accountants does not seem to increase firm value. In fact, the economic benefits of

assurance investigated at the time of this study relate only to firm value, cost of equity capital and information asymmetry.

Fuhrmann et al. (2013) documented that it is not assurance that matters, but rather certain content aspects of assurance statements that matter, because content consistency has a significant impact on reducing information asymmetry. The Fuhrmann et al. (2013) findings are at odds with indications from the present study, even though the theoretical grounds for the analyses in both studies are relatively similar. Indeed, Fuhrmann et al.'s (2013) theoretical framework is based on the idea that assurance reduces information asymmetry, whereas the current research utilises signalling theory and makes reference to how assurance signals could increase firm value by reducing information asymmetry between corporations and investors. There is ample room for future research in this arena, but current results certainly indicate that there is an opportunity for companies to benefit from assurance in order to 1) reduce information asymmetry and the associated credibility gap, 2) reduce their cost of equity capital, and 3) increase the market value of their shares.

Even though the present study has not yielded any evidence on the relevance of assurance quality to firm value, it does illustrate that accountants provide lower quality statements. The lower quality of their assurance statements is clearly associated with their reliance on purely accounting-driven standards (*ISAE3000*). This may suggest that accountants need to improve the quality of their assurance statements, possibly by using a combinations of the *AA1000 AS* and the *ISAE3000* to guide them.

In addition, accountants should also provide more detailed recommendations and conclusions. Since only the assurance signal is important to firm value, and since report quality and other attributes do not affect firm value, there could be some concerns about the possibility of other firms imitating the market signal. This may have implications for a firm's stance on spending huge funds for assurance. Firms will be discouraged from

spending huge funds on improving assurance quality if the desired effect can be easily imitated by firms providing substandard assurance quality. Clearly, this conundrum has implications and poses problems for assurance providers, and standard setters, because they must collaborate to achieve higher quality assurance standards that contribute to improving the quality of CSR assurance, and most importantly, part of their role is to prevent CSR assurance from becoming mere "symbolic accountability".

6.3 Research Limitations and Future Research

The conclusions reached in the current study are limited by the size of the sample. The potential sample consisted of 150 companies, of which only 36 companies provided assurance statements. However, since CSR assurance has an effect on firm value in such a small sample, it is likely that this effect will be more pronounced in a larger sample. A larger sample would alleviate concerns regarding the effect of the CSR assurance quality on firm value. Even though this study could not document any association between assurance quality and firm value, a larger sample size would rule out any concerns about the loss of significance due to the limited number of observations.

Results from one year may not be valid enough to make generalisations about the relationship between CSR assurance and firm value. A longitudinal study may be needed to track companies through the years to see how the quality of CSR assurance changes over time and how these changes might affect firm value. Furthermore, it may be interesting to investigate the effect of abandoning assurance after adopting assurance for a year, or for a period of time. Possibly, the decision to abandon assurance could have significant adverse effects for companies that are in the habit of consistently assuring their CSR reports. Indeed, the effects of abandoning assurance could be worse than ignoring assurance in the first place. In addition, it could also be interesting to investigate whether

the effect of assurance on firm value is related to the nature of disclosure. In other words, there is a need to investigate the difference in the value relevance of assurance on different types of CSR disclosure. Assurance effect may differ, depending on whether CSR disclosure is positive or negative.

CSR assurance is an area that is under-researched. Market reactions and economic benefits of CSR assurance are also under-researched (Casey & Grenier, 2015; Cohen & Simnett, 2014). Almost every study that has been conducted in the financial auditing arena can be brought across to the CSR assurance arena (Cohen & Simnett, 2014). The CSR assurance market has unique attributes, which makes it attractive to researchers, but at the same time difficult to research (e.g., due to variability in the content and the format of assurance statements). According to Cohen and Simnett (2014), there are opportunities for research at many levels of analysis, such as the market, organisational and decision-making levels. This research can be considered as a response to the need for market-level analysis.

There are several possibilities for future research extending from this study. The content analysis approach and the score obtained using this approach could be improved, and should always be updated and modified according to the latest standards. Furthermore, assurance is a governance mechanism, which in many cases will depend on general governance mechanisms and auditing policies and strategies employed by the firm. At the time the current study was conducted, market-level studies did not seem to take governance factors into consideration. Only decision-making and behavioural levels of analysis included governance factors (Brown-Liburd & Zamora, 2015; Peters & Romi, 2015). Although this research has provided evidence that governance significantly increases assurance quality, further studies may need to consider investigating the

associations between governance mechanisms and CSR disclosure, governance and adopting CSR assurance, and assurance quality as it relates to governance.

Very little is known about CSR assurance fees, since they are not publicly disclosed (Cohen & Simnett, 2014). Research could be undertaken to examine the association between fees and the quality of CSR assurance statements. Since the decision to assure is usually a result of cost–benefit analysis (Simnett et al., 2009), corporations that adopt assurance will not make the decision to do so if they do not believe that CSR assurance is beneficial. The fee for CSR assurance is also highly likely to affect assurance quality. Fees are likely to depend on the experience and reputation of the assurance provider. Therefore, higher fees could be associated with higher quality, since it is most likely that higher fees would be paid to highly reputable and experienced assurance providers (Barton, 2005; Moizer, 1997).

Assurance is likely to differ between environmental specialists and accountants. It may also differ between Big Four and non-Big Four accountants. Unfortunately, CSR assurance fees are rarely disclosed in annual reports or assurance statements they are also absent from databases such as *Bloomberg* and *Corporate Register* (Cohen & Simnett, 2014). This difficulty stifles quantitative research on the association between fees paid and assurance quality. However, it is possible to undertake qualitative research by interviewing and surveying company managers. These methods would allow scholars to examine managers' views on how they choose an assurance provider, and the relative importance of experience, reputation and fees to the decision of adopting assurance and the expected quality.

Although the present research only documents the association of CSR assurance and market capitalisation as a measure of firm value, there are several other measures of financial performance that could be used to investigate the association between CSR

assurance and financial performance.[6] In fact, the results could be more pronounced with a larger sample size. It is important to make sure the sample is international, because CSR assurance is still not widely adopted. Obtaining an international sample increases the number of companies that adopt assurance.

In addition, it might be interesting to observe if market capitalisation responds in different ways to the adopting CSR assurance based on whether the country is stakeholder- or shareholder-oriented. Both Australia and New Zealand are shareholder-oriented (Simnett et al., 2009), and therefore it is appropriate to use market capitalisation to measure movement in the market value of company shares that results from investors' responses to the assurance signal. Other measures of firm value and financial performance might capture interesting associations between CSR assurance and financial performance measures, which could vary depending on whether the country is stakeholder- or shareholder-oriented. Larger samples could provide in-depth insights into the variety of those associations.

Investors' level of awareness of CSR assurance does not seem to have been investigated yet. However, results from the present research suggest that assurance quality does not seem to influence market capitalisation, which could be attributed to quality not being noticeable or observable by investors. One of the reasons for an unobservable quality signal may be that investors lack an understanding of assurance standards. Experimental designs investigating share price movements show that investors' perceptions and judgements are affected by assurance and its attributes (Brown-Liburd et al., 2012; Dilla et al., 2014; Elliott et al., 2014; Hodge et al., 2009; Plumlee et al., 2015; Romero et al., 2014). However, none of these studies has tested

[6]The current research examined the effect of CSR assurance on Tobin *Q* and market returns, but no conclusions could be made, therefore the results were not reported. Future research may find evidence that these measures are associated with firm value.

whether participants understand assurance standards. Indeed, it seems that these studies tend to rely on the signals embedded in assurance alone, and do not test if there is a real understanding of the standards. Although it could be argued that understanding assurance standards is only necessary for assurance providers, it seems logical that investors should understand the standards in order to accurately assess the quality of assurance statements, which then influences their decision-making process in regards to their investment. Such an understanding would increase the real value of CSR assurance.

6.4 Concluding Remarks

CSR assurance is still an under-researched area that is attractive to many researchers. There is ample room for improving CSR assurance. Research on the economic benefits of assurance is therefore emerging as an interesting area for further exploration. It is difficult, however, to find evidence on the value relevance of CSR assurance, particularly in New Zealand and Australia, due to the difficulty of obtaining assurance data. Not all companies that report CSR information adopt assurance. Furthermore, the hand collection of assurance statements and the extraction of quality attributes is time-consuming. This difficulty is intensified by the fact that assurance is voluntary and unregulated in most countries, including Australia and New Zealand. In the future, improved availability of databases that specialise in providing assurance data will save time and make the study of CSR assurance easier. Furthermore, as investors become more educated about CSR reporting and CSR assurance, they will demand higher assurance quality, rendering the firms that are slow at adopting assurance to forego its benefits. As trailing firms realise the benefits that competitors reap, they are more likely to follow the trend and adopt CSR assurance, which will in turn increase its adoption and its quality. Continued research in this arena will ensure that assurance practices will

expand and that practitioners will benefit from knowledge gained in objective studies, which will likely result in accelerated growth of the CSR reporting and assurance industry. As CSR assurance evolves, it is likely to become even more attractive to business studies scholars.

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