User Perceptions of CSR Disclosure Credibility with Reasonable, Limited and Hybrid Assurances

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ABSTRACT

Firms seek independent assurance from accountants on their Corporate Social Responsibility ("CSR") disclosures for various reasons, including to enhance the credibility of such disclosures or to enhance the reliability of management's CSR report. However, there are multiple levels of assurance available for CSR disclosures. The forthcoming clarified U.S. attestation standards re-frame the two levels of assurance on non-financial information as reasonable (higher) and limited (lower). While not currently addressed by U.S. standards, accountants also issue hybrid reports with both reasonable and limited assurance on CSR disclosures. I conduct an experiment to identify differences in nonprofessional investors' perceptions of CSR disclosures when reasonable, limited, or hybrid assurances are provided and manipulate firm CSR performance as a possible moderator for the influence of assurance. Findings indicate that nonprofessional investors find CSR disclosures on greenhouse gas emissions to be credible, and the degree of credibility does not vary significantly based on the firm's performance in controlling emissions or on the level of assurance provided by an accountant. However, nonprofessional investors do differ in their perceptions of the overall reliability of representations made in management's CSR report. While management's CSR report supported by hybrid assurance is generally perceived to be as reliable as when only limited or only reasonable assurance is provided, the perceived reliability differs between limited and reasonable assurance. Supplemental analyses reveal an interaction such that management's CSR report is perceived as more reliable with limited assurance rather than with reasonable or no assurance for firms with better performance at controlling greenhouse gas emissions; this

association reverses for firms with worse performance. This interaction may be due, in part, to language in limited assurance reports that makes it clear higher assurance was available but not pursued by management. Results address a gap in the literature for hybrid assurance and show that nonprofessional investors find management's CSR report with hybrid assurance to generally be as credible and reliable as when either limited or reasonable assurance is provided. Further, results offer insight into the interactive effects of firm performance and level of assurance on nonprofessional investors' perceptions of the reliability of management's CSR report.

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GENERAL AUDIENCE ABSTRACT

Companies commonly report the results of their Corporate Social Responsibility ("CSR") activities to the public. Such reports may include information on the companies' greenhouse gas emissions, employee wellness initiatives, or community involvement (among others). As part of this reporting, companies have the option to hire independent accountants to assure (i.e., verify) the information, which may help to improve perceptions of the information's credibility or reliability. In providing this service accountants can offer two levels of assurance (one higher, one lower). There is also evidence that some companies engage accountants to provide higher assurance on some pieces of information and lower assurance on others. I perform an experiment to determine if readers of CSR reports perceive a difference in the credibility of reported greenhouse gas emissions based on (1) the level of assurance provided by an accountant and (2) how well the company controlled such emissions compared to the industry average (i.e., better or worse). In addition, I study these same users under the same conditions to determine if they perceive a difference in the overall reliability of information communicated in the CSR report on greenhouse gas emissions. I find users do not perceive a difference in the credibility of specific greenhouse gas emissions between the conditions studied. However, I do find that users perceive differences in the overall reliability of information conveyed in these CSR reports. Specifically, information depicting a company's poor performance compared to the industry is perceived to be more reliable than information depicting a company's superior performance when the accountant provides higher assurance or no assurance. That relationship reverses when lower assurance is provided, possibly due to lower assurance reports making it clear that a higher level of assurance

exists but was not pursued. In general, I find no differences in perceptions of the information's credibility or reliability when both levels of assurance are provided instead of only one.

DEDICATION

To Sarah - For being my rock through everything in life. From "sticking my first landing" (on the landing) to calling on random nights to hear my voice and remind me that you love me. Thank you for always supporting me and helping pave the way. I love you.

To Mom - You've shown me how to be strong when it matters most. For teaching me that risks are worth taking, especially if they have a chance to make me happy. And most importantly, for always being my mom and making me feel loved at all times no matter what. There's no replacement for a mom's love and guidance. I love you.

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To my future kids - The thought of you was a big part of my decision to pursue a Ph.D.; I hope this helps me provide you with the life you deserve.

To the rest of my family, blood and chosen - Listing how each of you helped make this a reality would be impossible, but I would not be here without your love and support. So, let me just say... Thanks for everything.

To Joy – Thank you for taking such good care of me through this process and listening to way too many stories about each step along the way. Our trips and get-aways provided much needed relief, but your constant love and support helped pull me through. I love you.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Firms may seek independent assurance from auditors on their Corporate Social Responsibility ("CSR") disclosures for various reasons, including to enhance the credibility of such disclosures (Simnett et al. 2009; GRI 2014b; Junior et al. 2014). However, there are multiple levels of assurance available for CSR disclosures and accounting research does not yet clearly support whether users perceive disclosures with higher assurance to be more credible than those with lesser assurance (Hasan et al. 2003; Hodge et al. 2009; Wieriks 2013). Further, accounting researchers have yet to examine perceptions of CSR disclosure credibility when multiple levels of assurance are provided in a hybrid independent accountant's report. This study investigates whether users perceive differences in CSR disclosure credibility across levels of assurance available under the recently clarified and recodified United States ("U.S.") attestation standards (reasonable and limited) and hybrid formats.[1] Additionally, this research considers whether perceptions of CSR disclosure credibility vary based on a firm's CSR performance in relation to the industry and whether CSR performance and level of assurance have interactive effects on perceptions of CSR disclosure credibility.

[1] The Auditing Standards Board ("ASB") of the American Institute of Certified Public Accountants ("AICPA") is currently working on the Attestation Clarity Project to clarify U.S. attestation standards under Statements on Standards for Attestation Engagements (AICPA 2014b). The Attestation Clarity Project will generate clarified and recodified U.S. attestation standards that are converged closer to the standards of the International Auditing and Assurance Standards Board ("IAASB") who issue International Standards on Assurance Engagements ("ISAE"s) (AICPA 2014b). However, full convergence to ISAE standards will not occur due to "the U.S. profession's experience with the attestation standards during the past 25 years" and the "inconsistencies with other U.S. professional standards" (AICPA 2013b, 6). Of particular interest to this study, the updated U.S. attestation standards will follow ISAEs and refer to *reasonable* and *limited* assurances. This is a change from the superseded U.S. standard, AT-101, *Attest Engagements* (AICPA 2001), which refers to *high* and *moderate* assurances. As such, this study proceeds by using the clarified U.S. attestation standards as the relevant attestation standards in the U.S.

CSR reporting is an organization's disclosure of the "economic, environmental and social impacts caused by its everyday activities" (GRI 2014a) and represents a growing market for independent auditors to verify non-financial information (KPMG 2013).[2] In the U.S., CSR reporting is largely a voluntary activity and the assurance of CSR reports has been associated with capital market benefits (Casey and Grenier 2015).[3] Despite these benefits, the U.S. has historically lagged the international market in the number of CSR reports externally assured (KPMG 2013; GRI 2014b). However, U.S. accounting firms are beginning to invest in CSR services (Gunther 2010; Foster 2012; KPMG 2013; EY 2014) and the number of assured CSR reports in the U.S. is increasing (GRI 2014b). The emerging U.S. CSR assurance market provides a unique opportunity to consider what is known about CSR reporting from more evolved markets and the associated challenges the U.S. is likely to encounter. For example, CSR report users are becoming more sophisticated and interested in the accuracy of and rigor applied in CSR disclosures (GRI 2014b). In response, CSR reporting firms are left to decide the level of assurance they seek from auditors and thus the intended level of comfort users may assume regarding the reliability of disclosures. Further, while recent findings suggest that CSR reports tend to focus on the positive performance of firms (Holder-Webb et al. 2009), CSR report users and scholars are calling for more balanced reports that also disclose negative performance results (KPMG and SustainAbility 2008; Cohen 2014).

[2] A broad nomenclature is used to refer to CSR-type reporting and activities, including: sustainability reporting, corporate responsibility, triple bottom line, environmental reporting and social reporting (KPMG and SustainAbility 2008).

[3] CSR reporting is "largely" voluntary in the U.S. with the exception of (1) required U.S. Securities & Exchange Commission disclosures, (2) the Dodd-Frank Act requirement to disclose conflict minerals and (3) the mandate for federal agencies to report CSR performance under Presidential Executive Order 13514 (KPMG 2013). Examples of CSR disclosures required by the Securities & Exchange Commission include those prescribed in Release No. 33-9106, *Commission Guidance Regarding Disclosure Related to Climate Change*, and Release No. 34-67716, *Conflict Minerals* (Littan 2014).

Under the predominant international assurance standards, International Standards on Assurance Engagements ("ISAE"), auditors can offer either "reasonable" or "limited" assurance on CSR disclosures (IAASB 2013a). However, there is not a definitive conclusion supported by accounting research whether users can differentiate between these levels of assurance (Hasan et al. 2003; Hodge et al. 2009; Low and Boo 2012; Wieriks 2013). The clarified and recodified U.S. attestation standards (herein, the "clarified U.S. attestation standards") also allow auditors to provide reasonable or limited assurance on CSR disclosures for examination or review engagements, respectively (AICPA 2015a). To complicate matters, U.S. and international auditors are issuing "hybrid" reports with different levels of assurance on varying disclosures (KPMG 2013; Wieriks 2013; GRI 2014b).[4] As U.S. standard setters continue to develop domestic CSR reporting practices and attestation standards, it is important to understand how differing levels of assurance are perceived and impact the decision-making of CSR report users. Further, given recent calls for more balanced reports that include both positive and negative results of CSR activities (KPMG and SustainAbility 2008; Cohen 2014), it is also important to examine the influence auditor assurances have on end-users across different levels of firm CSR performance.

Firms seeking assurance on CSR disclosures in the U.S. hire external auditors to perform procedures commensurate with the desired level of assurance. Under the clarified U.S. attestation standards, reasonable assurance engagements are referred to as "examinations" and require more robust procedures than limited assurance engagements, or "reviews" (AICPA 2015a).[5] Neither

[4] References are made throughout this study to "hybrid" reports, which are assurance reports with reasonable assurance provided on some disclosures and limited assurance on others. Another common name for this practice is "mixed" assurance.

[5] Both practical and theoretical reasons exist to support why CSR reporting firms elect to pursue reasonable or limited assurance. Practically, limited assurance requires less effort and thus is less costly than reasonable assurance. However, reasonable assurance provides higher levels of comfort that disclosures are reliable. Theoretically, firms may acknowledge that in disclosing negative news, users will inherently find the disclosures to be more credible,

ISAE nor U.S. attestation standards explicitly define hybrid assurance, but such assurance likely falls somewhere between the reasonable and limited level due to the combination of procedures performed to achieve both types of assurance. While the extant literature demonstrates that assurance from accountants influences users' perceptions of financial and non-financial information, typically in terms of credibility, (Kinney 2000; Fargher and Gramling 2003; Mercer 2004; Coram et al. 2009; Pflugrath et al. 2011; Moroney et al. 2012), it is not yet clear whether users differentiate between *levels* of assurance on financial or non-financial information (Hasan et al. 2003; Schelluch and Gay 2006; Hodge et al. 2009). This study contributes to the literature by examining the impact of assurance from public accountants for a relatively new service offering (i.e., assured CSR reporting) and simultaneously demonstrates whether users differentiate between reasonable and limited assurances on CSR disclosures under the clarified U.S. attestation standards. Furthermore, I examine the influence of hybrid assurance on users' perceptions of CSR disclosure credibility, with specific attention on the extent to which users contrast between reasonable and limited levels of assurance when both are presented in a single accountant's report.

CSR reporting in the U.S. is largely a voluntary activity, and many firms use the opportunity to make positive or good news disclosures about their related performance (Holder-Webb et al. 2009). However, calls for reporting of both good and bad news encourage the study of both positive and negative CSR performance conditions (KPMG and SustainAbility 2008; Cohen 2014). Persuasion theory in psychology suggests that individuals are more influenced (persuaded) when they do not expect a communicator to accurately report reality (i.e., a reporting bias), but then the actual message disconfirms these expectations (Eagly et al. 1978). I argue that

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thus decreasing the need for high levels of external assurance (Mercer 2004). Similarly, firms disclosing positive news may acknowledge that users will not perceive this information to be as credible, and thus seek out higher levels of external assurance to enhance the credibility of disclosures (Kinney 2000; Mercer 2004).

users expect CSR reporting firms to focus on disclosing positive activities, and therefore, are not strongly influenced by these disclosures. However, a user may be surprised when a firm voluntarily discloses negative CSR performance, and theory suggests that users will perceive such disclosures to be more credible than disclosures of positive performance (Eagly et al. 1978; Mercer 2004). As such, this study contributes to theory on user reactions to disclosures and examines whether firm CSR performance influences user perceptions of disclosure credibility, including whether that influence differs across levels of assurance.

Theory also supports unique outcomes from the interaction of firm CSR performance and levels of assurance. Findings from psychology provide evidence that severe negative events polarize judgment, and that perceptions of these events are less susceptible to influence (Shapiro et al. 1994). This finding suggests that negative CSR performance polarizes users' perceptions of firms such that there may be no incremental value in providing reasonable assurance to users on CSR disclosures. Psychology theory on communication also suggests that user perceptions of CSR performance will not differ between levels of assurance in the negative performance condition, as individuals are more influenced (persuaded) when their expectations of the communicator's message are disconfirmed as in the case when good news was expected (Eagly et al. 1978). Because disclosures in the negative performance condition should be perceived as more inherently credible, there may be less opportunity for external assurance to incrementally enhance the disclosure credibility, making it less likely that users will differentiate between levels of assurance. However, when a firm discloses neutral or positive performance, users may find these self-interested disclosures to be less credible (Mercer 2004). Because these disclosures are likely viewed as less credible, there should be more opportunity for independent assurance to enhance the perceived credibility of the disclosures (cf. Kinney 2000), such that users

differentiate between levels of assurance in the positive or neutral performance conditions. The interactive effects of assurance levels and firm CSR performance have not yet been examined and are addressed as part of this study.

I conduct this study using a 3 x 4 experimental design in which *firm CSR performance* (positive, neutral or negative) and *assurance provided* (reasonable, limited or one of two hybrids with reasonable (limited) assurance presented first) are manipulated between participants. Participants are 259 individuals residing in the U.S. with general business knowledge and experience with investing activities recruited through a crowdsourcing service, Amazon Mechanical Turk ("MTurk"), and proxy as CSR report users. The experiment is administered using Qualtrics in sessions lasting approximately 25 minutes and focuses on the environmental aspect of CSR reporting.

Participants access Qualtrics online and are provided the following related to a fictitious company: (1) background information, (2) greenhouse gas ("GHG") emission results and (3) an independent accountant's report on the GHG CSR disclosures. Consistent with Elliott et al. (2014), the first manipulation appears with the GHG CSR results and presents the firm as having positive, neutral or negative *CSR performance* in relation to industry averages. Four Global Reporting Initiative ("GRI") indicators of GHG emissions are used to present results for the firm and industry averages; each indicator is also accompanied by a percentage difference between the firm and industry.[6] The second manipulation appears within the independent accountant's report that provides reasonable, limited, or hybrid assurance (with reasonable or limited assurance presented first) on the GHG CSR results. In the reasonable and limited conditions, the same level of assurance is provided for each of the four GRI indicators. However, in the hybrid

[6] The GRI is the self-described "leading organization in advancing the disclosure of economic, environmental, social, and governance performance by organizations worldwide" (GRI 2014b, 3).

conditions, two of the four metrics receive reasonable assurance while the other two receive limited assurance within a single independent accountant's report. The assurance reports are structured in accordance with the American Institute of Certified Public Accountant's ("AICPA") Statement of Position ("SOP") 13-1 to reflect how such assurances have been explicitly prescribed for reporting on GHG CSR results under U.S. specific standards (AICPA 2013a).[7]

After the experiment is complete, participants are asked a series of questions to capture the dependent variables, including their perceptions of (1) disclosure credibility (Hodge et al. 2009), (2) reliability of reported results (Hodge et al. 2009), (3) assurance provided by the accounting firm (Hasan et al. 2003), (4) management's credibility, trustworthiness and forthcomingness (cf. Mercer 2004; Beyer et al. 2010; Pflugrath et al. 2011), and (5) the attractiveness of the firm as an investment opportunity (cf. Elliott et al. 2014). I also measure participants' attitudes about environmental issues for possible inclusion as covariates in my analysis (Dunlap et al. 2000). Finally, participants respond to a number of demographic and manipulation check questions.

Results of this study inform both academics and practitioners about the influence of firm CSR performance and levels of assurance on user perceptions of CSR disclosure credibility. In advancing academic theory, this study contributes to the literature on the influence of assurance on users' perceptions of non-financial disclosures and their reactions to unexpected disclosures

[7] SOP 13-1 is an interpretation of U.S. attestation standards under AT-101, *Attest Engagements*. However, as part of the ASB's Attestation Clarity Project (AICPA 2014b), AT-101 will be superseded upon final approval of the clarified U.S. attestation standards. Recent exposure drafts suggest the clarified standards will be effective for attestation reports dated on or after May 1, 2017 (AICPA 2015b; AICPA 2015c). In this study, emphasis is placed on the clarified U.S. attestation standards. For relevant differences between legacy (i.e., AT-101) and clarified U.S. attestation standards, wording in this study and the accompanying experiment reflects the clarified standards. For example, while SOP 13-1 provides illustrative independent accountant's reports based on AT-101, the wording of such reports in the experiment that accompanies this study reflects updates made as part of the ASB Attestation Clarity Project.

(e.g., Eagly et al. 1978; Hasan et al. 2003; Hodge et al. 2009). Specific to the literature on CSR, this study provides evidence on whether firm CSR performance influences users' perceptions of disclosure credibility and also demonstrates whether levels of assurance interact differently with firm performance in influencing user perceptions of disclosure credibility. Additionally, findings help clarify whether users differentiate between levels of assurance available for CSR reporting in the U.S., including the largely unexamined "hybrid" form of assurance. The combined effect of these items also have practical implications, primarily for the presentation and disclosure of assurances on CSR reports developed in accordance with the clarified U.S. attestation standards.

The remainder of this paper proceeds as follows: Chapter 2 discusses theory and development of my hypotheses; Chapter 3 presents the research methodology; Chapter 4 discusses analyses performed to examine the proposed hypotheses; finally, Chapter 5 provides a discussion, the contributions and possible limitations of this research, followed by references, figures, tables and appendices.

CHAPTER TWO

BACKGROUND AND LITERATURE REVIEW

2.1 CSR Reporting, Globally and in the United States

Globally, the practice of reporting on CSR activities is becoming "standard business" for firms (KPMG 2013, 11), and the number of large firms issuing assured CSR reports is on the rise (Green and Zhou 2013; KPMG 2013; Junior et al. 2014). Although CSR initiatives are becoming increasingly popular in the U.S. (Ballou et al. 2012), the reporting and assuring of CSR information currently lags behind levels seen in many other countries (KPMG 2013), for unknown reasons (Simnett et al. 2009; Ballou et al. 2012; Casey and Grenier 2015).

Holder-Webb et al. (2009) suggest that the U.S. trails other nations in disclosing CSR activities due to a lack of regulation of CSR disclosures and challenges in obtaining attestations on these disclosures. These authors also propose "firms are dissuaded from disclosing as investors may not take information seriously without assurance as to its quality" (Holder-Webb et al. 2009, 518). Casey and Grenier (2015) contribute to the discussion on a lack of CSR assurance in the U.S. by saying that such assurance is potentially being substituted by extensive regulatory oversight in key industries. Further, it is possible that an active media and the threat of litigation make negative reporting less relevant. Despite the relatively low level of CSR reporting and assurance in the U.S., mounting evidence exists about the benefits of CSR reporting and assuring these disclosures.

Recent archival studies document a number of benefits associated with CSR reporting. Goss and Roberts (2011) find that socially responsible firms pay lower basis points to lenders than less socially responsible firms. Dhaliwal et al. (2012) identify an association between lower forecast errors and firms issuing stand-alone CSR reports. Guiral et al. (2014) find that CSR

reporting is positively associated with internal control effectiveness. Finally, Casey and Grenier (2015) find that firms with *assured* CSR reports have a lower cost of equity capital and lower analyst forecast errors and dispersion. In light of these benefits, recent evidence suggests that the U.S. is beginning to close the gap in the number of CSR reports externally assured (KPMG 2013; GRI 2014b).

2.2 Levels of Assurance

Globally, the most referenced standard for accountants providing assurance on CSR disclosures is ISAE 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information* (Martinov-Bennie et al. 2012; Wieriks 2013; Cooper and Owen 2014; GRI 2014b). ISAE 3000 allows accountants to offer either a reasonable or limited level of assurance, with reasonable being a positive expression of assurance and limited being a negative expression of assurance (i.e., nothing came to our attention) (IAASB 2013a, par. 69(l)(ii and iii)). ISAE 3410, *Assurance Engagements on Greenhouse Gas Statements*, is more tailored to CSR reporting than ISAE 3000 and focuses specifically on assurance of GHG emission statements (IAASB 2013b). While these standards are the most commonly applied on a global basis, the assurance and attestation standards of individual countries may be used instead (AICPA 2014a).

Accountants in the U.S. may choose to not follow ISAE standards and instead perform attestations of CSR disclosures in accordance with U.S. attestation standards. Similar to ISAE 3000, the clarified U.S. attestation standards define two levels of assurance in attestation engagements and also refer to these levels as being reasonable when an examination is performed or limited when a review is performed (AICPA 2015a). Reasonable assurance is to be positively expressed as an opinion, whereas limited assurance is to be negatively expressed as a conclusion (AICPA 2015b; AICPA 2015c). Just prior to the ASB Attestation Clarity Project, the

U.S. attestation standards were interpreted via the AICPA's SOP 13-1, *Attest Engagements on Greenhouse Gas Emissions Information*, which provides guidance specific to assuring GHG emission disclosures and remains the only published interpretation of U.S. attestation standards for CSR engagements. See Table 1 for a comparison of pertinent details from ISAE 3000 and the clarified U.S. attestation standards.

Both the international and U.S. guidance focus on assuring non-financial information, such as CSR disclosures. However, in many countries (including the U.S.), the reporting and assuring of such information is largely a voluntary activity. It is therefore important to establish what is known about voluntary reporting environments.

2.3 Voluntary Reporting

Beyer et al. (2010) review the voluntary disclosure literature and highlight six conditions under which managers voluntarily disclose private information: (1) disclosures are costless; (2) investors know that firms have, in fact, private information; (3) all investors interpret the firms' disclosure in the same way and firms know how investors will interpret that disclosure; (4) managers want to maximize their firms' share prices; (5) firms can credibly disclose their private information; and (6) firms cannot commit ex-ante to a specific disclosure policy. These conditions constitute the "unraveling result," and the more of these conditions met by a firm, the more that firm managers will voluntarily disclose private information to distinguish themselves from lower-tier firms (Beyer et al. 2010). With CSR reports, there are costs (financial and effort) to disclose credible information (i.e., conditions 1 and 5), which suggests that not all related information will be disclosed. Even so, firms continue to make voluntary CSR disclosures, and it is therefore reasonable to expect that these disclosures provide some benefit to the reporting firm (cf. Holder-Webb et al. 2009; Beyer et al. 2010).

Coram et al. (2009) manipulated whether a firm voluntarily disclosed positive or negative non-financial performance indicators and whether assurance was provided on these disclosures in an experimental setting. Their findings suggest that the stock price estimates of sophisticated financial report users were significantly influenced by voluntarily disclosed non-financial performance indicators when such indicators were positive and assured (Coram et al. 2009). This result means that the voluntary disclosure of non-financial performance indicators can influence the decision making of sophisticated financial report users. Dhaliwal et al. (2011) find that when firms with a high cost of equity capital begin voluntarily disclosing strong social responsibility performance, they achieve a lower cost of equity capital in the following year. These same firms are also able to raise significantly more equity capital than other firms not initiating CSR disclosures (Dhaliwal et al. 2011). Finally, Plumlee et al. (2010) document that firm value (measured by future expected cash flows and cost of equity capital) is favorably associated with some aspects of voluntary environmental disclosure quality. Whether these benefits drive voluntary disclosure is not known, but evidence suggests that the number of non-financial disclosures (in general and specific to CSR) made by firms is increasing in absolute terms and that investors view these disclosures as increasingly important (Adams et al. 2011; Cohen et al. 2011; Cohen et al. 2012).

Plumlee et al. (2010) and Dhaliwal et al. (2011) make reference to the voluntary reporting of environmental and social responsibility information, both of which are components of CSR reporting. CSR reporting has provided organizations new opportunities to communicate with stakeholders and increase transparency on social and environmental initiatives (Junior et al. 2014). This reporting may also reduce information asymmetry and attest to "organizational commitment, risk management, and a desire to build corporate reputation" (Simnett et al. 2009,

940). Cohen et al. (2012) point out that firms have much flexibility in deciding how to disclose such non-financial information. Using a sample of U.S. firms, Holder-Webb et al. (2009) find that large firms predominantly make these disclosures (from most to least common) on their corporate websites, stand-alone governance documents, mandatory filings, and product fact sheets. Disclosures for smaller firms were found primarily in mandatory filings (Holder-Webb et al. 2009). Considering the lack of widespread structure and conformity in CSR reporting across the U.S., Cohen et al. (2012) suggest that the credibility (i.e., believability) of such disclosures would benefit from external assurance.

2.4 Assurance and Perceptions of Credibility

The combination of CSR issues being highlighted as important in the U.S. and the limited experience users have with CSR reporting under U.S. attestation standards creates an environment where users are likely to require assurance to believe firm CSR disclosures. Anecdotal evidence suggests that the U.S. media has a global reach and widely covers social and environmental issues, which reinforces the importance being placed on CSR matters in the U.S. (e.g., the BP oil spill in the Gulf of Mexico, automobile emissions, renewable energy, etc.). Users seek verification on information they find important (Flanagin and Metzger 2000). The more this information has a direct impact on someone, the more users will initially doubt its truth (Gunther 1992). For CSR reporting, this means the importance of social and environmental issues is continuously reinforced, which implies users may seek verification on related CSR disclosures. Further, users that have little experience with how information is presented will find that information to be less credible (cf. Flanagin and Metzger 2000). Considering the relatively immature stage of CSR reporting in the U.S., this lack of user experience implies that people

using reported CSR information might not yet find the disclosures to be highly credible in isolation.

Mercer (2004) defines disclosure credibility as "investors' perceptions of the believability of a particular disclosure," and highlights the importance of this being a *perception* held by users (p. 186). Independent assurance is able to enhance the credibility of disclosures made by management, because assurance increases the perceived reliability of such claims (Kinney 2000). Therefore, when management makes disclosures, including those with respect to CSR reporting, there is an opportunity for the credibility of these disclosures to be enhanced by independent assurance (Nugent and Simnett 2007).

Simnett et al. (2009) point out that assurance is not free and is purchased (presumably) when the benefits outweigh the costs. The benefits of assuring a CSR report may include enhancing disclosure credibility, building corporate reputation, increasing user confidence in the disclosed information, and reducing information asymmetry (Simnett et al. 2009; Junior et al. 2014). Pflugrath et al. (2011) find that financial analysts in the U.S. perceive CSR reports to be more credible when assured by professional accountants. Moroney et al. (2012) document that assurance enhances the quality of environmental reports in the eyes of stakeholders and this quality of reports is the same when accountants or consultants provide the assurance. Based on these perceptions, assurance is an important tool in combatting the uncertainty users may feel with this relatively new form of reporting in which the nature and content of reports varies significantly (Hodge et al. 2009).

While the benefits of assuring CSR reports may seem evident, Pflugrath et al. (2011) warn that such benefits may be context specific. These authors used an experiment to study how financial analysts' perceptions of CSR report credibility change across conditions with different

assurers (no assurance vs. assurance from professional accountants vs. assurance from sustainability experts) and industries (mining vs. retail). Findings specific to the U.S. suggest that in an industry with few assured CSR reports and relatively little incentive to misstate such disclosures (i.e., retail), the perceived credibility of CSR information does not differ when it is assured, nor when assured by a professional accountant versus a sustainability expert (Pflugrath et al. 2011). However, in an industry with more instances of assured CSR reporting and incentives to misstate (i.e., mining), assurance increases the trustworthiness and credibility of the CSR information, and assurance from accountants is perceived as more trustworthy, expert, and credible than assurance from sustainability experts (Pflugrath et al. 2011). These findings highlight that the benefits of CSR reporting assurance can be context specific.

Other research supports Pflugrath et al.'s (2011) finding that assurance from professional accountants is preferred. In a study of multinational corporations from the Fortune Global 250 during 1999, 2002, 2005 and 2008, Perego and Kolk (2012) conclude that accounting firms provide the highest quality assurance statements on CSR reports. The competing assurance providers in Perego and Kolk's (2012) study include certification bodies, specialists and "others" such as academic institutions and non-governmental organizations ("NGO"s). Ballou et al. (2012) add to this discussion based on a survey of 178 corporate sustainability officers. In speaking about the success of companies strategically integrating internal functions with CSR initiatives, they find that "obtaining assurance is associated with strategic integration, especially when provided by a public accounting firm" (Ballou et al. 2012, 267). Hodge et al. (2009) also demonstrate that users find CSR reports with *reasonable* (but not limited) assurance to be more credible when issued by a public accounting firm than by a specialist consultant firm.

2.5 Levels of Assurance and an Expectations Gap

As alluded to with the findings of Hodge et al. (2009), a discussion of assurance on CSR information provided by professional accountants would not be complete without considering the fact that there are two levels of assurance available under both U.S. and ISAE standards. For both ISAE and clarified U.S. attestation standards, these levels are referred to as reasonable and limited assurance (IAASB 2013a; AICPA 2015a). While reasonable assurance is delivered with an opinion or positive expression of assurance, limited assurance is delivered with a negative expression of assurance (i.e., nothing came to our attention) (IAASB 2013a; AICPA 2015b; AICPA 2015c). Researchers have begun to offer insight into the differences between these levels of assurance.

Gay et al. (1998) conducted an experiment using auditors, company secretaries and shareholders (i.e., preparers, non-sophisticated users and more sophisticated users) to determine whether each group could distinguish between the level of assurance provided in an audit (i.e., positive assurance) and review (i.e., negative assurance) report. Findings suggest that all groups could identify the audit report as providing more assurance than a review report. Similar results were identified by Schelluch and Gay (2006) in that prospective financial information with positive assurance was deemed more reliable than had it been presented with negative assurance. While these studies support the theory that users can differentiate between positive and negative assurances, neither was conducted in the context of CSR reporting.

It is not clear whether users can differentiate between levels of assurance with CSR reporting. Hasan et al. (2003) use a CSR reporting scenario to examine whether shareholders perceive a difference in assurances provided between a high assurance report and four different

moderate assurance reports.[8] Their results indicate that users can differentiate between high and moderate assurance with three of four examined iterations of a moderate assurance CSR report. Of particular interest to the current study, Hasan et al. (2003) identify a significant difference ($p < 0.05$) in perceived assurance between the (control) high assurance report and a moderate assurance report expressed with negative assurance. Hodge et al. (2009) also experimented with users' ability to differentiate between levels of assurance provided on CSR reports, yet failed to find a main effect in users' confidence and perceptions of credibility with CSR reports. In sum, these findings fail to establish whether users can differentiate between levels of assurance in CSR disclosures.

As part of studying user perceptions of levels of assurance in CSR reports, both Hasan et al. (2003) and Hodge et al. (2009) designed their experiments using international standards and an Australian-based participant pool. Not only are there slight variations in the assurances and disclosures between ISAE and clarified U.S. attestation standards, but also the use of assured CSR reporting remains a relatively new and evolving practice in the U.S. Considering the earlier discussion that users react differently to information based on their experience with the presentation (cf. Flanagin and Metzger 2000), users of CSR reports developed under the clarified U.S. attestation standards are a novel group worthy of study. Further, Casey and Grenier (2015) conclude that the CSR assurance market in the U.S. "fundamentally differs from international markets" in terms of regulation and oversight, adding to the motivation to consider U.S.-specific

[8] Hasan et al. (2003) use high and moderate assurances as defined in ISAE 100. However, ISAE 100 was superseded by ISAE 3000 in the year 2000 and soon thereafter required the use of reasonable and limited assurances. Legacy ISAEs and U.S. Statements on Standards for Attestation Engagements ("SSAEs") have both described assurance levels as high or moderate, yet the current standards refer to these assurances as reasonable and limited (IAASB 2013a; AICPA 2015a). In all cases, and as used throughout this study, reasonable and high assurances are used to describe levels of assurance that are stronger than limited or moderate.

implications of assured CSR reporting (p. 99).[9] While the present study focuses on users of CSR information reported under the clarified U.S. attestation standards, there is research at both the U.S. and international level to support *why* users may fail to differentiate between levels of assurance.

A number of accounting studies reference an "expectations" or "communications" gap to explain why users of accounting information misestimate the amount of implied assurance or are not able to distinguish between levels of assurance (e.g., Gay et al. 1998; Roebuck et al. 2000; Hasan et al. 2005; Schelluch and Gay 2006; Hodge et al. 2009; Mock et al. 2009; Mock et al. 2012; Wieriks 2013). Hasan et al. (2005) examine this phenomenon by extending the International Auditing Practices Committee's ("IAPC") research monograph No. 1, *The Determination and Communication of Levels of Assurance Other than High* (IFAC 2002).[10,11] Their primary finding is that audit firms (as represented by technical partners or managers) believe clients do not have a good understanding of the difference between a review and an audit, and have less understanding of the difference between moderate and high assurance. Third parties (i.e., non-clients) are believed to have even less of an understanding (Hasan et al. 2005). Further, the study finds audit firms have an average of 60% confidence in moderate assurance engagements and 88% in high assurance engagements (Hasan et al. 2005). The results of this study highlight that even amongst audit firms there is widespread belief that users do not

[9] Specifically, Casey and Grenier (2015) find that when compared to firms in other industries, financial and utilities firms in the U.S. are not more likely to obtain CSR assurance. This is not the case for non-U.S. financial and utilities firms. One possible explanation is that U.S. financial and utilities firms are highly regulated, and this regulation might be replacing the need for CSR assurance (Casey and Grenier 2015). Simnett et al. (2009) also add to the discussion on the uniqueness of the U.S. CSR environment and point out that U.S. accounting firms may have high concerns about litigation related to CSR assurance. Finally, Gainet (2010) examines the European CSR market and highlights that "continental Europe and the U.S. approach governance in very different ways, so there is no reason to assume that empirical evidence from Europe will duplicate findings from North America" (p. 195).

[10] The IAPC is now the International Auditing and Assurance Standards Board, IAASB.

[11] Hasan et al. (2005) is a survey of Big 5 and non-Big 5 auditing firms from 11 countries, not including the United States. Excluding the U.S. was a deliberate design choice due to "advice that questions in the survey did not make sense in view of the attestation standards in place in that country" (Hasan et al. 2005, 100). Such elections reinforce the motivation of the present study to separately examine the U.S. CSR assurance environment.

understand the levels of assurance; this confusion may contribute to an expectations gap between the assurance assumed by users and the assurance provided by auditors.

Other studies also identify a gap between auditors' and users' perceptions of assurance provided. Gay et al. (1998) found an expectations gap with users attributing high assurance to a moderate assurance report. Hodge et al. (2009) also found an expectations gap in the levels of assurance conveyed in CSR reports based on ISAE 3000 and Standard on Assurance Engagements ("ASAE") 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*. Finally, Mock et al. (2009) conducted a qualitative study using a combination of interviews and focus groups to examine user perceptions of unqualified financial audit reports; results indicate a communications gap exists between the assurance that auditors believe they communicate and the level of assurance perceived by users.

The literature described to this point establishes a debate on whether users can differentiate between levels of assurance on CSR disclosures (e.g., Hasan et al. 2003; Hodge et al. 2009) and identifies the potential for an expectations gap to exist when evaluating perceptions of assurance levels (e.g., Gay et al. 1998; Hodge et al. 2009; Mock et al. 2009; Wieriks 2013). However, the key condition not present in any of these studies is hybrid assurance. A specific call to consider hybrid assurance was recently made by Cohen and Simnett (2015) and is an emerging phenomenon that lacks robust research in the accounting literature.

2.6 Hybrid Assurance and Contrast Effects

As previously described, a hybrid assurance report includes reasonable assurance on some disclosures and limited assurance on others, and auditors issue this type of report in the U.S. and internationally (Mock et al. 2007; KPMG 2013; Wieriks 2013; GRI 2014b). Using a dataset of companies issuing CSR reports (worldwide) from 2002 – 2004, Mock et al. (2007)

find that 9% of these reports are hybrids, and that this percentage increases to 15.2% when specific to CSR reports issued by Big 4 firms. More recently, KPMG (2013) finds that hybrid reports make up approximately 8% of assured CSR reports worldwide.[12] While some suggest that hybrid assurance confuses report readers (Wieriks 2013), other possible implications may exist. This study uses contrast effects to frame one way that hybrid assurances may influence the decision-making of CSR report users.

A contrast effect occurs when individuals contrast information from a previous decision with information of a similar nature for a current decision (Bhattacharjee et al. 2007). Bhattacharjee et al. (2007) highlight that using comparisons to make decisions may be a way for individuals to exert relatively lower cognitive effort (Libby et al. 2004) and that comparative information is typically used by decision makers when available (Slovic and MacPhillamy 1974; Lipe and Salterio 2000). Further, this comparative process may be an automatic and unconscious process (Hsee 1996, 1998).

For the present study, theory on contrast effects suggests that users provided with full descriptions of both reasonable and limited assurances (i.e., hybrid assurance) in the independent accountant's report may contrast these two assurance levels. The exact influence of a contrast between reasonable and limited assurances on users determining the credibility of CSR disclosures in a hybrid report is not known. One potential result may be users penalizing firms for not obtaining the highest level of assurance on all CSR disclosures, and thus perceiving a

[12] This stands in contrast to 10% of verified reports having reasonable assurance and 72% of verified reports having limited assurance, per ISAE 3000 classifications; the level of assurance on the remaining 10% of reports is not clear (KPMG 2013). Mock et al. (2007) provide that Big 4 firms are less likely to offer positive (i.e., reasonable) assurances, which may be due in-part to having larger clients, and that "assurance services for sustainability-related information is a fairly new and unregulated field" so "it may be more difficult and more risky to provide positive assurance for larger, more complex clients" (p. 73).

lower level of disclosure credibility from the limited assurance statement than had a contrast not been provided.[13]

This study is also designed to consider assimilation effects, a potential alternative explanation to changes in users' decision-making in the hybrid condition if contrast effects are not found. Assimilation effects occur when a stimulus and anchor are perceived as similar by an individual, who then rates the stimulus as being more like the anchor (Hovland et al. 1958). Contrast effects work in the opposite direction, such that an individual perceives the stimulus and anchor as being different enough to form a clear distinction between the two (cf. Hovland et al. 1958). Assimilation effects will be apparent in this study if participants in the hybrid condition rate the overall credibility of disclosures as being more like the credibility perceived from the first assurance (anchor) described in the hybrid report (i.e., reasonable or limited).[14] However, a more robust approach to testing for possible contrast or assimilation effects also must consider the performance of the firm obtaining assurance.

2.7 Firm CSR Performance and User Expectations of Performance

As discussed earlier, CSR reporting in the U.S. is largely voluntary. Therefore, firms choosing to report CSR results can do so in a structure and format of their choosing. Given the freedom in reporting, firms in the U.S. are making "self-laudatory" or largely positive CSR

[13] Note that there is also potential for a contrast to occur within limited assurance statements. Wording for the Independent Accountant's Report when a review is performed (i.e., limited assurance) under the clarified U.S. attestation standards prescribes a statement that "a review is substantially less in scope than an examination" (AICPA 2015c, par. 3.45(f)(iii)). However, no such contrast is provided for examinations (i.e., reasonable assurance) that an examination is more robust in scope than a review. As such, there is the potential for contrast effects to exert influence in both the hybrid and limited assurance conditions. Given the amount of attention given to each level of assurance in the hybrid condition, the potential for contrast effects should be strongest in hybrid conditions.

[14] There is no formal guidance under the clarified U.S. attestation standards on issuing hybrid assurance reports. As such, the presentation order of assurances in a hybrid report is left to the discretion of the independent accountant. Given the wide variety of CPAs entitled to issue attestation reports in the U.S., there is likely to be variability in practice as to the order assurances are presented in hybrid reports (i.e., reasonable then limited, or limited then reasonable).

disclosures (Holder-Webb et al. 2009, 517). However, recent calls in the market and accounting literature indicate a desire for firms to use balanced reporting that would include both positive and negative CSR activities (KPMG and SustainAbility 2008; Cohen 2014).[15] As such, it is important to consider the influence firm CSR performance may have on user decision-making.

A firm can have positive, neutral or negative CSR performance in relation to prior years, peer firms, or an industry average. Elliott et al. (2014) conducted an experiment in which firm CSR performance was manipulated. To establish the relative performance of firms in their study, the experimental materials included the CSR results for a target hypothetical firm along with industry averages (Elliott et al. 2014). Results of this study show that a firm's CSR performance influences investors' estimates of fundamental firm value, but this influence is unintentional and fully mediated when participants are told to explicitly assess CSR performance as part of their firm valuation (Elliott et al. 2014). For purposes of my study, regardless of intent, these findings suggest that firm CSR performance has the potential to influence user decision-making.

There are a number of approaches to predict how users may respond to a firm reporting positive or negative CSR performance. One approach is to consider the literature that suggests users find positive news disclosures to be less credible than negative news disclosures (Williams 1996; Hutton et al. 2003; Mercer 2004) and that assurance may only influence user decision-making in positive performance conditions (Coram et al. 2009). However, this would not provide for a robust prediction given there might be a pre-existing user expectation that firms would only disclose positive news in CSR reporting. This expectation of positive news disclosures is

[15] CSR reporting firms might also fear a backlash from report users when specific disclosures are discontinued, much in the same way that firms fear investor reactions to discontinued earnings guidance (cf. Chen et al. 2011). By keeping the recurring CSR indicators and adding more over time, CSR reports will naturally grow and inevitably present more balanced reporting of positive, neutral and negative performance indicators. However, this assumes that firms will not be able to maintain purely positive performance across an ever growing and diversifying set of CSR disclosures.

supported by findings in a recent GRI survey of nearly 2300 CSR report users/non-users worldwide (KPMG and SustainAbility 2008). Further, McNichols (1989) documents that managers have more incentive to provide positive (rather than negative) disclosures. Therefore, an appropriate approach to examining the influence of firm CSR performance on user perceptions of disclosure credibility takes into account the likely expectation of positive firm performance.

Persuasion theory from psychology offers insight into how individuals may react when their expectations of a message are (dis)confirmed. Specifically, individuals are more influenced (persuaded) when they do not expect a messenger to accurately report reality (i.e., the messenger is perceived to have a reporting bias), but then the actual message appears to be truthful and disconfirms these expectations (Eagly et al. 1978). I make the assumption that users expect a reporting bias in that firms will only disclose positive CSR performance. Therefore, theory suggests these users will perceive any non-self-interested (i.e., negative performance) disclosures to be more credible than disclosures of positive performance (Eagly et al. 1978; Mercer 2004). However, this influence of firm CSR performance on users' perceptions of disclosure credibility remains unexplored across reasonable, limited, and hybrid assurances.

2.8 Levels of Assurance and Firm Performance

Given the discussion to this point about the influence of levels of assurance and firm performance on user perceptions of CSR disclosure credibility, multiple approaches may be used to predict the effects of an interaction between these variables. To begin, findings from psychology suggest that severe negative events polarize judgments, making users' perceptions of these events less susceptible to influence (Shapiro et al. 1994). For the current study, this means that a firm's negative CSR performance should polarize user perceptions and leave no room for

assurance to influence the credibility of CSR disclosures. This is consistent with the findings of Coram et al. (2009), that assurance is context specific and might only exert significant influence on decision makers in positive performance conditions. Said differently, if negative disclosures are already highly credible, additional assurance may be irrelevant (cf. Williams 1996; Hutton et al. 2003; Mercer 2004). Also, if users expect voluntary disclosures to indicate positive performance (KPMG and SustainAbility 2008; Beyer et al. 2010), disclosures that disconfirm this expectation (and indicate negative performance) will be viewed as more inherently credible (cf. Eagly et al. 1978). Therefore, in negative performance conditions, I expect that users will not differentiate between the credibility of disclosures with reasonable, limited, or hybrid assurances. I formally predict my first hypothesis as follows:

H1a: In the *negative* performance condition, participants will not perceive a difference in the credibility of CSR disclosures when reasonable, limited or hybrid assurances are provided.

Although assurance is context specific and might only influence perceptions of disclosure credibility in positive performance conditions (cf. Coram et al. 2009), it is not clear that this influence is strong enough to result in positive and negative disclosures with equal perceived credibility. Therefore, when the level of assurance is held constant, negative performance disclosures should be perceived as more credible than when the same disclosures indicate positive performance. This prediction is formalized in the next hypothesis as:

H1b: CSR disclosures in the *negative* performance condition will be perceived as more credible than the same disclosures in the *positive* performance condition when the level of assurance is held constant.

If the impact of assurance on perceptions of disclosure credibility is context specific (cf. Coram et al. 2009), there is more of an opportunity for assurance to influence perceptions of disclosure credibility in the positive performance condition (cf. Kinney 2000) because users find self-interested disclosures to be less inherently credible (Mercer 2004). However, it remains unclear from the existing literature whether users differentiate between reasonable and limited levels of assurance on CSR disclosures (Hasan et al. 2003; Hodge et al. 2009).

The widespread disclosure of quantitative CSR information in the U.S. is a relatively recent phenomenon, and assured reporting of this information under U.S. attestation standards remains immature. As such, users have little experience with CSR reports assured in accordance with U.S. attestation standards. Research suggests that a lack of experience with how information is presented and perceptions of lower credibility lead individuals to verify information (cf. Flanagin and Metzger 2000). For the present study, if users lack experience with CSR reports assured under U.S. attestation standards and find positive CSR performance to be inherently less-credible (cf. Mercer 2004), assurance level should affect the perceived credibility of CSR disclosures. Therefore, I predict users will differentiate between levels of assurance in the positive performance condition in accordance with the following hypothesis:

H2: In the *positive* performance condition, participants will perceive CSR disclosures to be more credible when reasonable rather than limited assurance is provided.

Within the positive performance condition, a rational and objective CSR report user would likely identify reports with hybrid assurance as offering less assurance than a report with only reasonable assurance, but more assurance than a report with only limited assurance. However, decision-making is not always rational and objective. Theory on contrast effects (e.g., Hakel et al. 1970; Foti and Hauenstein 1993; Bhattacharjee et al. 2007) suggests that information

used in a previous decision will be compared with information for a current decision when the information sets are similar in nature. A contrast is then apparent if the individual perceives a clear distinction between these information sets (cf. Hovland et al. 1958). For the present study, reports with hybrid assurances will include descriptions of both reasonable and limited assurance within a single independent accountant's report. Upon confronting the first assurance provided on CSR disclosures (whether it be reasonable or limited) in the independent accountant's report, users will develop a perception as to the meaning of this assurance. Users will then encounter a second and different level of assurance on the remaining CSR disclosures. With these assurances provided immediately after one-another and in the same context (i.e., both are from a large international accounting firm and relate to CSR disclosures), users will consciously or unconsciously contrast the reasonable and limited assurances (cf. Hsee 1996, 1998).

What happens after users contrast reasonable and limited assurances on CSR disclosures within the context of a single independent accountant's report is unknown. However, the contrast in assurances will make it salient to users that there are two levels of assurance: reasonable and limited. The contrast will also make it clear to users that both reasonable and limited assurances may be used with CSR disclosures. Finally, the context of the experiment will make it clear that the reporting firm elects the level of assurance, so users will find it puzzling why a firm would have pursued reasonable assurance on some disclosures and a lower (limited) level of assurance on others. This internal conflict should highlight that limited assurance is lower assurance and also call into question any motivations by the firm to not seek the highest available assurance. I predict that the net-impact of events triggered by identifying a contrast is a penalty imposed upon the reporting firm in that users will perceive CSR disclosures with hybrid assurance to be less credible than disclosures with only reasonable or only limited assurance. This line of reasoning

assumes that while the general CSR report users recruited for this study have some familiarity with reports generated from an audit, they are not familiar with the intricacies of the audit process, and thus would not consider factors such as cost or time/effort as reasons to pursue specific levels of assurance. This assumption is further supported by the fact that fees paid for assurance of CSR reports are not typically disclosed and are otherwise difficult to ascertain. I formally predict my final hypothesis as follows:

H3: In the *positive* performance condition, participants will perceive the credibility of CSR disclosures to be lower with hybrid assurance than with reasonable or limited assurance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design and Experimental Materials

I address the hypotheses above using a 3 x 4 experimental design in which *firm CSR performance* and *assurance provided* are manipulated between participants. Figure 1 provides a flowchart of the experimental procedures and Appendices A through Z present the experimental materials. The experiment was administered online using Qualtrics. Upon accessing the study, participants were directed to review the experimental instructions and then received background information on the fictitious Tasty Water Beverage Company ("TWBC").[16,17] As part of the background information, participants were made aware that TWBC is a U.S. company in the food and beverage industry that posts an annual environmental CSR report on their corporate website.[18] While TWBC employs a Vice President of Sustainability Activities, a larger team of executives decided to have specific disclosures in the most recent environmental CSR report verified by a large international accounting firm. Further, the materials explicitly communicated that these same executives chose the level of assurance that the large international accounting firm would provide on CSR disclosures.

After reviewing the background information, participants were provided excerpts from the most recent TWBC environmental CSR report. This was a stand-alone CSR report and not part of a larger financial reporting package. While these reports can often be many pages in

[16] Qualtrics has been used to develop and administer numerous accounting experiments (Perreault & Kida 2011; Brown-Liburd et al. 2012; Lambert et al. 2013; Ozlanski 2013; Saucedo 2014).

[17] Brandon et al. (2014) review "high-quality accounting academic journals" and find that the design and use of online instruments in accounting studies is on the rise from 2000 to 2012 (p. 4). Of the journals considered, *The Accounting Review* and *Accounting, Organizations and Society* published the most studies that used online instruments (Brandon et al. 2014). These authors also conclude that participants recruited through online survey firms such as Qualtrics, SurveyMonkey and Amazon Mechanical Turk generate data that is as externally valid as more traditional recruiting options (i.e., the use of MBA students).

[18] TWBC was intentionally placed in the food and beverage industry, as KPMG (2013) indicates this industry performs at the global average in terms of the quality and number of CSR reports issued.

length, the experiment limited the materials to (1) a report cover page, (2) TWBC presentation and discussion of their GHG emissions for the year, including their performance in relation to the food and beverage industry, and (3) an independent accountant's report. This use of specific excerpts from the CSR report is consistent with the approach used by Hasan et al. (2003), with the goal to avoid unnecessary length or deviation from the focus of the study. Further, the choice to focus on GHG emissions as the relevant aspect of environmental CSR performance was driven by the fact that the only U.S.-specific guidance on assuring CSR disclosures is SOP 13-1, *Attest Engagements on Greenhouse Gas Emissions Information* (AICPA 2013a).

TWBC's presentation and discussion of their GHG emissions highlight four CSR indicators defined by the GRI's G4 guidelines (GRI 2013). The G4 guidelines are the most recent set of CSR indicators defined and published by the GRI in pursuit of their global mission of making "sustainability reporting standard practice" (GRI 2014b, 2). Further, GRI's guidelines are the most used CSR reporting frameworks by companies worldwide (KPMG 2013). While the GRI G4 guidelines offer seven potential GHG emission indicators, the following four were selected because they are likely the most understandable for a general audience: G4-EN15: *Direct greenhouse gas emissions*; G4-EN16: *Energy indirect greenhouse gas emissions*; G4-EN17: *Other indirect greenhouse gas emissions*; and G4-EN19: *Reduction of greenhouse gas emissions* (GRI 2014c).[19]

[19] Selected G4 indicators are defined by the GRI as follows:
G4-EN15: *Direct greenhouse gas emissions* (Scope 1): "Emissions from operations that are owned or controlled by the organization" (GRI 2013).
G4-EN16: *Energy indirect greenhouse gas emissions* (Scope 2): "Emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by the organization" (GRI 2013).
G4-EN17: *Other indirect greenhouse gas emissions* (Scope 3): "Other indirect greenhouse gas emissions are all indirect emissions (not included in Scope 2) that occur outside of the organization, including both upstream and downstream emissions" (GRI 2013).
G4-EN19: *Reduction of greenhouse gas emissions*: "A decrease in greenhouse gas emissions or an increase in removal or storage of greenhouse gas emissions from the atmosphere, relative to baseline emissions" (GRI 2013).

As part of TWBC's presentation and disclosure of the selected GRI G4 indicators, each indicator was included in a summary table showing the performance of TWBC, the food and beverage industry average, and TWBC's percentage difference from the industry average.[20] Each indicator was then also presented and described in narrative format (with a first-person voice from TWBC). Consistent with Elliott et al. (2014), TWBC's performance was manipulated with respect to performance against the industry average to establish positive, neutral or negative *CSR performance*. Indicators EN15, EN16 and EN17 were presented in thousands of metric tons of carbon-dioxide emissions and varied from the industry average by approximately -60%, 0%, or 60% in the positive, neutral and negative performance conditions (respectively). Indicator EN19 was presented as a percentage reduction in emissions of approximately 60%, 0% (same as industry), and -60% (i.e., an increase) in the positive, neutral and negative performance conditions (respectively). The magnitude of differences to establish positive, neutral and negative performance is consistent with the approach used by Elliott et al. (2014).

The second manipulation appeared in the final excerpt from TWBC's environmental CSR report: the independent accountant's report. Here, a large international accounting firm provided either reasonable, limited or hybrid (with reasonable or limited assurance described first) assurance on the disclosed GHG emission indicators. The general format and verbiage of the independent accountant's report was guided by examples provided in SOP 13-1 (AICPA 2013a) and the clarified U.S. attestation standards (AICPA 2015b; AICPA 2015c), and also included a summary table of the assured indicators. In both the reasonable and limited assurance conditions, the same level of assurance was offered for each of the four GRI indicators. However, the hybrid

[20] TWBC greenhouse gas emission levels reflect those of a company approximately 5% of the size (in terms of emissions) of The Coca-Cola Company or PepsiCo. These same companies were used as a guide to establish differences in emission levels between EN15, EN16 and EN17 (i.e., EN16 emissions are approximately double the EN15 emissions, and EN17 emissions are approximately 1.82 times the EN15 emissions).

condition required both reasonable and limited assurances on different indicators, and neither SOP 13-1 nor the clarified U.S. attestation standards provide an illustrative example of a hybrid report. Therefore, the hybrid condition required a number of critical design choices.

The AICPA does not openly endorse a format for how hybrid assurance reports should be presented. Two of the more common options are to (1) provide two separate independent accountant's reports, one for each level of assurance, or (2) provide a single independent accountant's report that clearly describes the level of assurance on specific disclosures (PwC 2007; Wieriks 2013). In a survey, Wieriks (2013) finds that subject matter experts prefer a single independent accountant's report and also provides evidence that this format is used more often in practice. Therefore, I use a single report in the hybrid condition. To determine whether the level of assurance on a specific indicator influenced results, the design also included randomization of indicator/assurance pairs so that the same indicators did not always receive the same level of assurance. In each hybrid report, two indicators received reasonable assurance and two received limited assurance.[21] Further, two hybrid conditions were used to test for assimilation effects as an alternative explanation to contrast effects: (1) one hybrid condition with reasonable then limited assurance presented, and (2) one hybrid condition with limited then reasonable assurance presented.

3.2 Dependent Variables

After viewing the independent accountant's report participants responded to several dependent variables well established in the literature, with the primary measure capturing

[21] As previously described, I used four GRI indicators in this experiment: G4-EN15, G4-EN16, G4-EN17, and G4-EN19. To assign levels of assurance to indicators in the hybrid reports, I grouped G4-EN15 with G4-EN16 and then G4-EN17 with G4-EN19. Such groupings were intended to keep indicators close to the order in which they were described in TWBC's CSR report. Participants had an equal chance of receiving reasonable or limited assurance in either grouping of GRI indicators in the hybrid conditions; in all hybrid conditions, one group of indicators received limited assurance and the other received reasonable assurance.

participants' perceptions of disclosure credibility (Hodge et al. 2009). Other dependent variables include: (1) the reliability of reported results (Hodge et al. 2009), (2) the perceived assurance provided by the accounting firm (Hasan et al. 2003), (3) management's perceived credibility, trustworthiness, and forthcomingness (cf. Mercer 2004; Beyer et al. 2010; Pflugrath et al. 2011), and (4) the attractiveness of the firm as an investment opportunity (cf. Elliott et al. 2014). Responses were collected using a questionnaire at the end of the study using 7-point Likert scales (0 to 6, or -3 to +3 depending on the question) with all points labeled and end-points primarily appearing as Strongly Disagree / Strongly Agree.[22] There was also a series of questions to measure participants' attitudes about environmental issues (Dunlap et al. 2000) for inclusion as possible covariates. The manipulation check appeared alongside dependent variable questions, and the experiment concluded with demographic questions.

3.3 Pilot Testing

Pilot testing was conducted to determine the average length of time participants took to complete the experiment, assess likely passage rates of the manipulation check, and refine variables of interest. Participants in the pilot were 66 MTurk "Masters" who received such designation based on their record of accuracy and acceptance rates in completing Human Intelligence Tasks ("HITs") in MTurk.[23] Further, I used system controls in MTurk to only accept participants located in the U.S. with a HIT approval rate greater than or equal to 90%.[24] Participants were also asked whether they (1) were at least 18 years old, (2) currently resided in

[22] Eutsler and Lang (2015) find that having all points labeled minimizes response bias, maximizes variance, maximizes power, and minimizes error. They also find that 7-point scales may maximize variance.

[23] Amazon describes the MTurk Master as a performance based distinction. Specifically: "Masters are elite groups of Workers who have demonstrated accuracy on specific types of HITs on the Mechanical Turk marketplace. Workers achieve a Masters distinction by consistently completing HITs of a certain type with a high degree of accuracy across a variety of Requestors. Masters must continue to pass our statistical monitoring to remain Mechanical Turk Masters" (Amazon Mechanical Turk 2015).

[24] MTurk allows Requestors (i.e., those conducting a study) to review responses from MTurk Workers and either approve or deny payment. Thus, by requiring a HIT approval rate greater than or equal to 90%, the Requestor is trying to attract participants with a proven record of submitting acceptable HITs.

the U.S., (3) had purchased stock in the past 12 months, and (4) had not bought/sold/traded stock as part of their employment responsibilities (cf. Ozlanski 2013); only those responding "Yes" were given access to the instrument. Based on these requirements, participants were individuals with general business knowledge and experience with investing activities, and serve to proxy as users of CSR reports. The average completion time for the experiment was 35.1 minutes, but only 23/66 (34.8%) participants passed the manipulation check about the description(s) of assurance provided in the independent accountant's report. As such, the pilot resulted in minor modifications to dependent variable question wording and the addition of three comprehension check questions related to: (1) who prepared the independent accountant's report, (2) whether the independent accountant's report related to TWBC's financial statements or greenhouse gas emissions, and (3) how many methods the accountant used to verify the greenhouse gas emissions.

A second pilot was run with the added comprehension check questions, but this time participants were 29 MTurk Workers not required to be Masters. All other requirements of participants remained consistent from the first pilot. The decision to not limit participants to Masters was intended to obtain more generalizable results. This second pilot resulted in an increased manipulation check passage rate of 21/29 (72.4%), and took participants an average of 38.5 minutes to complete.

3.4 Participants

Participants for the live study were 734 MTurk Workers that met the same requirements as defined above for the second pilot study and thus proxy for CSR report users.[25] These

[25] Participants closely resemble non-professional investors, and Krische (2015) points out that "researchers interested in issues broadly relevant to nonprofessional U.S.-based investors could legitimately access such individuals via Amazon's Mechanical Turk platform by employing an investment filter during the recruiting

requirements adhered to the guidance provided by Libby et al. (2002) as the task could be completed by participants with basic accounting and investing knowledge, and thus I avoided "using more sophisticated subjects than is necessary" to achieve the goals of the study (p. 802). Other accounting studies have also used crowdsourcing firms to recruit similar participants (Brazel et al. 2011; Brown-Liburd et al. 2012; Lambert et al. 2013; Ozlanski 2013; Saucedo 2014). Further, the specific use of MTurk participants is gaining popularity in accounting research (Rennekamp 2012; Brandon et al. 2014; Koonce et al. 2015; Krische 2015). Each of the 734 participants was paid $2.50 to complete the experiment, which had an average duration of 25.1 minutes and standard deviation of 18.4 minutes. This resulted in an effective hourly rate of $5.98, well above the effective hourly rate of $3.75 documented in Rennekamp (2012).

process" (p. 28). The requirements for participation in my study include such an investment filter, as described with the first pilot study.

CHAPTER FOUR

DATA ANALYSIS

4.1 Manipulation Check

Not all 734 participants could be used in the final sample. Participants were removed for the following reasons: (1) failing the manipulation check question that asked whether the accountant provided the same verification (i.e., assurance) on all four greenhouse gas emission indicators; (2) passing the manipulation check but failing the comprehension check that asked how many methods to verify (i.e., assure) TWBC's greenhouse gas emissions were described in the independent accountant's report; (3) spending less than one minute on the experiment; (4) not having a Worker ID appear in the MTurk output, which is a unique ID used to identify distinct participants; (5) failing the comprehension check question that asked who prepared the independent accountant's report; (6) failing the comprehension check question that asked whether the independent accountant's report related to TWBC's financial statements or greenhouse gas emissions; (7) not correctly identifying the firm as having positive, neutral, or negative performance as compared to the industry average; and (8) not answering the dependent variable questions.[26, 27] The remaining sample included 259 responses with an average completion time of 26.4 minutes (low = 6.2 minutes; high = 88.4 minutes) for an effective hourly

[26] The third requirement highlights that I removed participants for spending less than one minute on the experiment. This action was to disqualify participants that clearly did not complete the experiment and likely accessed then quickly exited the survey just to receive payment. Based on this requirement, I removed eight participants who spent an average of 10 seconds on the experiment (with a range of 4 to 25 seconds).

[27] Participants were asked "How did you perceive TWBC's performance in controlling greenhouse gas emissions as compared to the industry average?" and responded using a 7-point fully labeled scale with endpoints Much Worse (-3) and Much Better (+3). The mid-point was labeled Neutral (0). Those in the positive performance condition were removed for any responses from -3 to 0 while those in the negative performance condition were removed for any responses from 0 to +3. Finally, participants in the neutral performance condition were removed for answers of -3, -2, +2, +3. Each group therefore had three acceptable responses to determine whether participants understood TWBC's performance as compared to the industry average.

rate of $5.68 per participant. A reconciliation of all participants to the final accepted sample is provided on Table 2.

Participants' demographic information is provided in Panel A of Table 3. Of the accepted participants: (1) 55.04% were male and 44.96% were female, (2) 44.79% were between the age of 26-34 and another 29.73% were between 35-54, (3) 59.07% had at least a four-year college degree, (4) 97.67% learned to speak English at less than five years old, (5) 46.72% were working a full-time job while another 14.53% were working part-time, and (6) 17.99% classified their work as "professional and related" and another 16.55% as "office and administrative support."[28]

I also compared the demographics of accepted versus rejected participants to determine whether any differences were significant. See Panel A of Table 3. The accepted sample had a higher proportion of participants that (1) learned to speak English at less than five years old and (2) were unemployed, laid off, or looking for work ($p < 0.05$). However, the accepted sample also had a lower proportion of participants that worked in construction and extraction ($p < 0.05$). These differences did not raise concerns about the final accepted sample.

4.2 Preliminary Analysis

I used analysis of variance ("ANOVA") models as one method to test my hypotheses and examine other dependent variables. As such, I first had to test whether the data met the three basic assumptions of an ANOVA model: independent observations, normal distribution of the dependent variables, and homogeneity of variance (Keppel 1991, 97).

I addressed the first assumption, independent observations, in the design of the experiment by randomly assigning participants to one of twelve experimental conditions (see Table 4 for the twelve experimental cells). To assess the second assumption, normal distribution

[28] These percentages are approximate as not all participants responded to all demographic questions. See Table 3 for the specific denominator used in each case.

of the dependent variables, I visually inspected boxplots and normal probability plots for each dependent variable. This inspection raised concerns about the normal distribution of each dependent variable. Further, both the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality showed the distribution of dependent variables to be significantly different from a normal distribution. Although ANOVA is robust to modest violations of this assumption (Ferguson 1981, 245), I performed supplemental analyses with the Mann-Whitney U test. Mann-Whitney is a nonparametric test, so makes no assumptions about the distribution of the data (Wilcoxon 1945; Mann and Whitney 1947).

For the third and final assumption, homogeneity of variance, I used Levene's test and found unequal variance ($p < 0.10$) for all but one of my dependent variables (i.e., perceived level of verification provided by the accountant). For the dependent variables with unequal variance I performed the nonparametric Levene's test, which is believed to be more robust and powerful when the data are not normally distributed (Nordstokke and Zumbo 2010). To perform the nonparametric Levene test, I first ranked responses to the dependent variable (higher scores = higher ranks) and created group means for each experimental condition. Next, I took the difference between the group mean and ranked score for each response and performed a one-way ANOVA on the difference between groups (Nordstokke and Zumbo 2010). Two dependent variables with unequal variance identified in the initial Levene's test were found to have equal variance ($p > 0.05$) using the nonparametric Levene test: credibility of disclosures and attractiveness as an investment opportunity. For dependent variables without equal variance based on the Levene test or nonparametric Levene test, I corroborated significant ANOVA results with nonparametric Mann-Whitney U tests (Wilcoxon 1945; Mann and Whitney 1947).

Prior to testing hypotheses, I graphed the means for each cell based on the dependent variables. See Panel A in Figures 3 through 13. The primary dependent variable for hypothesis testing is presented in Panel A of Figure 3 and asks participants "How credible do you find TWBC's disclosures about greenhouse gas emissions?" Here, I identify differences in my predicted and actual results based on visual inspection of the plots presented in Figures 2 and 3 (Panel A). Specifically, there appear to be differences in participants' perceptions of CSR disclosure credibility across levels of assurance in the negative performance condition. Further, negative performance is not always associated with more credible disclosures than positive performance. Finally, limited assurance appears to be associated with more credible disclosures than reasonable assurance in the positive performance condition. While a visual inspection of Figure 3 (Panel A) provides insight into the pattern and direction of responses across groups, it is not sufficient to identify statistically significant differences between cells.

Also prior to hypothesis testing, I ran a two-way ANOVA to identify any significant interactions or main effects with my primary dependent variable, credibility of disclosures. See Panels A and B of Table 5 for related descriptive statistics and ANOVA results. The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.666$), nor significant main effects for assurance ($p = 0.644$) or performance ($p = 0.295$). Note that these p-values, as well as those included throughout the remainder of this study, are two-tailed unless otherwise noted. I therefore proceed and test hypotheses with contrasts of relevant cells, and corroborate findings with nonparametric Mann-Whitney U tests.

4.3 Tests of H1a

Hypothesis 1a examines the influence of assurance for firms with negative CSR performance. Specifically, I investigate whether perceptions of CSR disclosure credibility differ

under limited, reasonable, or hybrid assurances. To test this hypothesis, I tested contrasts between the means of each cell in the negative performance condition (see Panel C of Table 5). Six unique comparisons were required to contrast the four negative performance cells against one another. Results show no significant difference in cell means among limited, reasonable, or hybrid assurances. To corroborate these results, I performed the same comparisons using nonparametric Mann-Whitney U tests and again found no significant differences between cells in the negative performance condition. See Table 6, Panels A through F.

Taken together, these results indicate that the null hypothesis in H1a cannot be rejected, which suggests that users do not perceive a difference in CSR disclosure credibility when limited, reasonable, or hybrid assurances are provided for firms with negative CSR performance.

4.4 Tests of H1b

Hypothesis 1b examines the influence of a firm's CSR performance on perceptions of CSR disclosure credibility, with a specific focus on differences due to positive and negative performance when the level of assurance is held constant. To test this hypothesis, I tested contrasts between the means of the positive and negative performance cells within the same assurance condition (see Panel C of Table 5). Four unique comparisons were required to contrast positive and negative performance across all assurance conditions. Results show no significant difference in cell means between positive and negative performance across limited, reasonable, or hybrid assurances. To corroborate these results, I performed the same comparisons using nonparametric Mann-Whitney U tests and again found no significant differences between cells in the positive and negative performance condition when the level of assurance was held constant. In addition, I used Mann-Whitney U to test for a main effect between positive and negative performance with the reasonable, limited, and hybrid (limited then reasonable, and reasonable

then limited) assurance cells collapsed; again I found no significant difference. See Table 6, Panels G through K.

Taken together, these results do not support my prediction in H1b that the CSR disclosures of firms with negative performance are perceived as more credible than the same disclosures of firms with positive performance. Rather, my results suggest there is no difference in perceptions of CSR disclosure credibility when a firm has positive or negative performance and the level of assurance is held constant.

4.5 Tests of H2

Hypothesis 2 examines the influence of reasonable and limited assurance on perceptions of CSR disclosure credibility for firms with positive CSR performance. To test this hypothesis, I tested the contrast between the means of the reasonable and limited assurance cells within the positive performance condition (see Panel C of Table 5). Results show no significant difference in cell means between reasonable and limited assurance in the positive performance condition. To corroborate these results, I performed the same comparison using a nonparametric Mann-Whitney U test and again found no significant difference between reasonable and limited assurance cells in the positive performance condition. In addition, I used Mann-Whitney U to test for a main effect between reasonable and limited assurance with the positive, neutral, and negative performance cells collapsed; again I found no significant difference. See Table 6, Panels L and M.

Taken together, these results do not support my prediction in H2 that CSR disclosures with reasonable assurance are perceived as more credible than disclosures with limited assurance for firms with positive CSR performance. Rather, results suggest there is no difference in

perceptions of CSR disclosure credibility when a firm obtains reasonable or limited assurance in a positive performance condition.

4.6 Tests of H3

Hypothesis 3 examines the influence of hybrid assurance, as compared to reasonable or limited assurance, on perceptions of CSR disclosure credibility for firms with positive CSR performance. To test this hypothesis, I tested the contrasts between the means of each hybrid cell (limited then reasonable, and reasonable then limited) and the means of both the reasonable and limited assurance cells in the positive performance condition (see Panel C of Table 5). Four unique comparisons were required to contrast each of the two hybrid cells against both the reasonable and limited assurance cells. Results show no significant difference in cell means between the hybrid cells and the reasonable or limited assurance cells. To corroborate these results, I performed the same comparisons using nonparametric Mann-Whitney U tests and again found no significant differences between the hybrid cells and the reasonable or limited assurance cells in the positive performance condition. In addition, I used Mann-Whitney U to test for differences when the hybrid cells were collapsed into a single cell and compared to reasonable and limited assurance in the positive performance condition; again I found no significant differences. See Table 6, Panels N through S.

Taken together, these results do not support my prediction in H3 that CSR disclosures with hybrid assurances are perceived as less credible than disclosures with reasonable or limited assurance for firms with positive CSR performance. Rather, my results suggest there is no difference in perceptions of CSR disclosure credibility when a firm obtains reasonable, limited, or hybrid assurances in a positive performance condition.

4.7 Additional Analyses

4.7.1 Environmental Attitudes as a Covariate

I used the Revised New Environmental Paradigm ("NEP") scale (Dunlap et al. 2000) to measure participants' environmental attitudes. The NEP uses 15 questions to measure ecological worldviews in terms of: (1) the reality of limits to growth, (2) anti-anthropocentrism (i.e., the equality of humans with other species), (3) the fragility of nature's balance, (4) rejection of exemptionalism (i.e., the relationship between humans and the environment), and (5) the possibility of an eco-crisis (Dunlap et al. 2000). Responses were collected using the same 5-point Likert scale provided by Dunlap et al. (2000) with endpoints Strongly Disagree and Strongly Agree. Agreement with the eight odd-numbered questions indicates a pro-ecological view, while disagreement with the seven even-numbered questions indicates a pro-ecological view (Dunlap et al. 2000). See Table 7 for specific questions and a summary of responses.

Participants' environmental attitudes were then used as a covariate in the two-way ANOVA previously performed with perceptions of disclosure credibility as the dependent variable. I performed this analysis of covariance ("ANCOVA") with six different measures for environmental attitudes: one for each of the five sub-areas addressed by the NEP scale, and one for a composite score of all 15 responses. In all cases I reverse-coded items for which negative responses indicated a pro-ecological view; this resulted in higher responses representing stronger pro-ecological views. Results are presented in Panel D of Table 5. As shown, the covariate was not significant in any of the six ANCOVAs. Further, the interaction and main effect terms remain not significant, which is consistent with results prior to including the environmental attitude covariates.

4.7.2 Hypothesis Testing with Reliability as the Dependent Variable

In addition to asking participants how credible they found the disclosures about greenhouse gas emissions, I also asked how reliable they found the representations made in the environmental sustainability report (cf. Hodge et al. 2009). I therefore revisit the hypothesis testing performed in sections 4.3 through 4.6 using responses to reliability of representations as the dependent variable. Panel A of Figure 4 presents a plot of the results, while Tables 8 and 9 provide supporting statistical analyses. The reliability dependent variable failed the normal distribution and homogeneity of variance ANOVA assumptions, so parametric analyses are corroborated with nonparametric Mann-Whitney U tests.

Prior to specific hypothesis testing, I ran a two-way ANOVA on the reliability dependent variable. See Panels A and B of Table 8 for related descriptive statistics and ANOVA results. The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.743$), nor a significant main effect for assurance ($p = 0.250$). However, there is a significant main effect for performance ($p < 0.001$). To investigate the performance main effect, I ran pairwise comparisons and found representations are perceived as more reliable in the positive rather than neutral performance condition ($p = 0.014$). A review of all pairwise comparisons also reveals representations are perceived as more reliable for: (1) positive rather than neutral performance with hybrid (reasonable then limited) assurance ($p = 0.054$); (2) positive rather than negative performance with limited assurance ($p = 0.046$); (3) positive rather than neutral performance with limited assurance ($p = 0.007$); and (4) reasonable rather than hybrid (limited then reasonable) assurance in negative performance ($p = 0.061$). See Panel C of Table 8 for all pairwise comparisons.

4.7.2.1 Tests of H1a with Reliability as the Dependent Variable

Hypothesis 1a examines the influence of assurance for firms with negative CSR performance, with a specific focus on differences due to limited, reasonable, or hybrid assurances. While the ANOVA results did not identify any differences between levels of assurance in the negative performance condition, I perform tests of specific contrasts between the means of each cell in the negative performance condition (see Panel D of Table 8). Six unique comparisons were required to contrast the four negative performance cells against one another. Results show that representations are perceived as more reliable when reasonable rather than limited assurance is provided ($p = 0.033$) and when reasonable rather than hybrid (limited then reasonable) assurance is provided ($p = 0.010$) for firms with negative CSR performance. To corroborate these results, I performed the same comparisons using nonparametric Mann-Whitney U tests and again find representations to be more reliable with reasonable rather than limited assurance ($p = 0.058$) and with reasonable rather than hybrid (limited then reasonable) assurance ($p = 0.048$). See Table 9, Panels A through F.

Taken together, these results fail to support my prediction in H1a. Rather, I find that users perceive a difference in the reliability of representations when certain assurances are provided in the negative performance condition.

4.7.2.2 Tests of H1b with Reliability as the Dependent Variable

Hypothesis 1b examines the influence of a firm's CSR performance, with a specific focus on differences due to positive and negative performance when the level of assurance is held constant. While pairwise comparisons from the ANOVA analysis reveal that participants perceive representations to be more reliable with positive rather than negative performance under limited assurance ($p = 0.046$), I perform tests of specific contrasts between the means of all

positive and negative performance cells within the same assurance condition (see Panel D of Table 8). Four unique comparisons were required to contrast positive and negative performance across all assurance conditions. Results show that representations are perceived as more reliable when a firm has positive rather than negative performance in the limited assurance condition ($p = 0.015$). To corroborate these results, I performed the same comparisons using nonparametric Mann-Whitney U tests and again found representations are perceived as more reliable when a firm has positive rather than negative performance in the limited assurance condition ($p = 0.032$). However, I also found that representations are perceived as more reliable when a firm has negative rather than positive performance in the reasonable assurance condition ($p = 0.061$). In addition, I used Mann-Whitney U to test for a main effect between positive and negative performance with the reasonable, limited, and hybrid (limited then reasonable, and reasonable then limited) assurance cells collapsed, but found no significant difference. See Table 9, Panels G through K.

Taken together, these results do not support my prediction in H1b. Rather I find mixed results, in that representations are perceived as more reliable for firms with positive rather than negative performance in the limited assurance condition, but are more reliable for firms with negative rather than positive performance in the reasonable assurance condition.

4.7.2.3 Tests of H2 with Reliability as the Dependent Variable

Hypothesis 2 examines the influence of reasonable and limited assurance for firms with positive CSR performance. While the ANOVA results did not identify a significant difference between reasonable and limited assurance in the positive performance condition, I performed a contrast test between the means of the reasonable and limited assurance cells within the positive performance condition (see Panel D of Table 8). Results show a difference in cell means between

reasonable and limited assurance in the positive performance condition ($p = 0.115$). To corroborate this finding, I performed the same comparison using a nonparametric Mann-Whitney U test and found representations with limited assurance are perceived as more reliable than those with reasonable assurance ($p = 0.030$). In addition, I used Mann-Whitney U to test for a main effect between reasonable and limited assurance with the positive, neutral, and negative performance cells collapsed, but found no significant difference. See Table 9, Panels L and M.

Taken together, these results do not support my prediction in H2. Rather, results suggest users perceive CSR representations to be more reliable when a firm obtains limited rather than reasonable assurance in a positive performance condition.

4.7.2.4 Tests of H3 with Reliability as the Dependent Variable

Hypothesis 3 examines the influence of hybrid assurance, as compared to reasonable or limited assurance, when a firm has positive CSR performance. While the ANOVA results did not identify any differences between hybrid and reasonable or limited assurances in the positive performance condition, I perform tests of specific contrasts between the means of each hybrid cell (limited then reasonable, and reasonable then limited) and the means of both the reasonable and limited assurance cells in the positive performance condition (see Panel D of Table 8). Four unique comparisons were required to contrast each of the two hybrid cells against both the reasonable and limited assurance cells. Results show no significant difference in cell means between the hybrid cells and the reasonable or limited assurance cells. To corroborate these results, I performed the same comparisons using nonparametric Mann-Whitney U tests and find representations are perceived as more reliable with (1) limited rather than hybrid (limited then reasonable) assurance ($p = 0.097$) and (2) hybrid (reasonable then limited) rather than reasonable assurance ($p = 0.052$). In addition, I used Mann-Whitney U to test for differences when the

hybrid cells were collapsed into a single cell and compared to reasonable and limited assurance in the positive performance condition, but found no significant differences. See Table 9, Panels N through S.

Taken together, these results do not support my prediction in H3. In general, the results suggest that the reliability of representations with hybrid assurance is similar to when just limited or just reasonable assurance is provided. However, the analyses also reveal that representations in positive performance conditions are perceived as more reliable with limited assurance than with hybrid assurance (limited then reasonable), and more reliable with hybrid assurance (reasonable then limited) than with reasonable assurance. This serves as early evidence that the order of assurance presentation in hybrid reports may cause representations to be perceived as more (less) reliable than when just reasonable (limited) assurance is provided. Specifically, the second assurance presented in a hybrid report may be the more influential than the first in impacting users' perceptions of reliability.

4.7.3 Analyses of Dependent Variables related to Perceptions of Management

I did not make specific predictions about dependent variables related to perceptions of management's credibility, trustworthiness, or forthcomingness. To initially determine if significant differences existed between cells, I performed two-way ANOVAs on each variable. Each of these three dependent variables failed the normal distribution and homogeneity of variance ANOVA assumptions, so parametric analyses are corroborated with nonparametric Mann-Whitney U tests.

The first dependent variable on perceptions of management asked participants to use a 7-point Likert scale (endpoints Strongly Disagree, -3, and Strongly Agree, +3) to indicate their level of agreement with the statement: "I believe that TWBC's management team is credible."

The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.327$), nor a significant main effect for assurance ($p = 0.756$). However, there is a significant main effect for performance ($p = 0.008$). I ran pairwise comparisons to investigate the performance main effect and found that management was perceived to be more credible in the positive rather than negative performance condition ($p = 0.014$) and in the positive rather than neutral performance condition ($p = 0.040$). See Panels A through C of Table 10 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found that management was perceived to be more credible in the positive rather than negative performance condition ($p = 0.023$) and in the positive rather than neutral performance condition ($p = 0.008$). See Panels A and B of Table 11 for Mann-Whitney U tests, and Panel A of Figure 5 for plotted results.

The second dependent variable on perceptions of management asked participants to use the same 7-point Likert scale to indicate their level of agreement with the statement: "I believe that TWBC's management team is forthcoming." The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.380$), nor a significant main effect for assurance ($p = 0.213$). However, there is a significant main effect for performance ($p = 0.022$). I ran pairwise comparisons to investigate the performance main effect and found that management was perceived to be more forthcoming in the positive rather than neutral performance condition ($p = 0.021$). See Panels A through C of Table 12 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate this finding, I ran a Mann-Whitney U test and again found that management was perceived to be more forthcoming in the positive rather than neutral performance condition ($p = 0.007$). See Panel A of Table 13 for the Mann-Whitney U test, and Panel A of Figure 6 for plotted results.

The third and final dependent variable on perceptions of management asked participants to use the same 7-point Likert scale to indicate their level of agreement with the statement: "I believe that TWBC's management team is trustworthy." The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.235$), nor a significant main effect for assurance ($p = 0.620$). However, there is a significant main effect for performance ($p = 0.003$). I ran pairwise comparisons to investigate the performance main effect and found that management was perceived to be more trustworthy in the positive rather than neutral performance condition ($p = 0.005$) and in the positive rather than negative performance condition ($p = 0.029$). See Panels A through C of Table 14 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found that management was perceived to be more trustworthy in the positive rather than neutral performance condition ($p = 0.001$) and in the positive rather than negative performance condition ($p = 0.031$). See Panels A and B of Table 15 for Mann-Whitney U tests, and Panel A of Figure 7 for plotted results.

In general, these findings indicate that perceptions of management are positively influenced when firms have positive CSR performance.

4.7.4 Analyses of the Investment Opportunity Dependent Variable

To measure the attractiveness of TWBC as a potential investment opportunity, I provided participants a 7-point Likert scale (endpoints Very Bad, -3, and Very Good, +3) and asked: "How attractive do you find TWBC as a potential investment opportunity?" I did not make specific predictions about this variable, and therefore planned to use a two-way ANOVA for relevant analyses. Although the variable failed the normal distribution ANOVA assumption, it

achieved homogeneity of variance using the nonparametric Levene test ($p = 0.291$). As such, parametric analyses are corroborated with nonparametric Mann-Whitney U tests.

The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.743$), nor a significant main effect for assurance ($p = 0.250$). However, there is a significant main effect for performance ($p < 0.001$). I ran pairwise comparisons to investigate the performance main effect and found that TWBC was a more attractive investment opportunity in the positive rather than negative performance condition ($p < 0.001$), in the positive rather than neutral performance condition ($p < 0.001$), and in the neutral rather than negative performance condition ($p < 0.001$). See Panels A through C of Table 16 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found that TWBC was a more attractive investment opportunity in the positive rather than negative performance condition ($p < 0.001$), in the positive rather than neutral performance condition ($p < 0.001$), and in the neutral rather than negative performance condition ($p < 0.001$). See Panels A through C of Table 17 for Mann-Whitney U tests, and Panel A of Figure 8 for plotted results.

These findings indicate that firms with better CSR performance are perceived as more attractive investment opportunities than firms with lesser CSR performance.

4.7.5 Analyses of the Perceived Level of Verification Dependent Variable

To measure the perceived level of verification, I provided participants a 7-point Likert scale (endpoints Zero Verification (Assurance), 0, and Absolute Verification (Assurance), 6) and asked: "Please indicate the level of verification (assurance) you perceive from the independent accountant's report provided on TWBC's 2014 Environmental Sustainability Report." I did not make specific predictions about this variable, and planned to use a two-way ANOVA for

relevant analyses. Although the variable failed the normal distribution ANOVA assumption, it achieved homogeneity of variance using the Levene test ($p = 0.758$). The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.263$), nor a significant main effect for assurance ($p = 0.168$) or performance ($p = 0.174$). See Panels A and B of Table 18 for related descriptive statistics and ANOVA output, and Panel A of Figure 9 for plotted results.

These findings indicate that the level of verification (assurance) perceived from the independent accountant's report does not change under varying levels of assurance and firm performance.

4.7.6 Analyses of remaining Dependent Variables

Four additional dependent variables were used to analyze participants' reactions to levels of assurance and firm CSR performance. For the first variable, participants indicated how confident they were that TWBC's true performance was reported, and the remaining three variables asked participants to indicate their level of agreement with statements that: (a) TWBC's management had emissions verified to increase the credibility of results, (b) assurance increased the credibility of results, and (c) the results were more believable because of the assurance provided. I did not make specific predictions about these dependent variables, and began analyses with two-way ANOVAs. Although each of these variables failed the normal distribution ANOVA assumption, each passed the homogeneity of variance assumption using either the Levene test or nonparametric Levene test. As such, parametric analyses are corroborated with nonparametric Mann-Whitney U tests.

The first of these additional dependent variables asked participants to use a 7-point Likert scale to indicate their response to: "How confident are you that Tasty Water Beverage

Company's 2014 Environmental Sustainability Report represents the true performance of the company with respect to greenhouse gas emissions?" (endpoints Strongly Not Confident, -3, and Strongly Confident, +3). The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.412$), nor a significant main effect for assurance ($p = 0.882$). However, there is a moderately significant main effect for performance ($p = 0.078$). I ran pairwise comparisons to investigate the performance main effect and found that participants were more confident in the positive rather than neutral performance condition ($p = 0.072$). See Panels A through C of Table 19 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate this finding, I ran a Mann-Whitney U test and again found that participants were more confident in the positive rather than neutral performance condition ($p = 0.033$). See Panel A of Table 20 for the Mann-Whitney U test, and Panel A of Figure 10 for plotted results. These findings provide limited evidence that users may be more confident that the true results are presented for firms with positive CSR performance.

The second of these additional dependent variables asked participants to use a 7-point Likert scale to indicate their level of agreement with the statement: "I believe that TWBC's management team had their greenhouse gas emission results externally verified (i.e., assured by an independent accountant) to increase the credibility of the reported results" (endpoints Strongly Disagree, -3, and Strongly Agree, +3). The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.509$), nor a significant main effect for assurance ($p = 0.599$). However, there is a moderately significant main effect for performance ($p = 0.059$). I ran pairwise comparisons to investigate the performance main effect and found that participants agreed with this statement more in the positive rather than negative performance condition ($p = 0.055$). See Panels A through C of Table 21 for related descriptive statistics,

ANOVA output, and pairwise comparisons. To corroborate this finding, I ran a Mann-Whitney U test and again found that participants agreed with this statement more in the positive rather than negative performance condition ($p = 0.085$). See Panel A of Table 22 for the Mann-Whitney U test, and Panel A of Figure 11 for plotted results. These findings provide limited evidence that users believe management would obtain assurance to enhance the credibility of CSR disclosures more in a positive rather than negative performance condition.

The third of these additional dependent variables asked participants to use a 7-point Likert scale to indicate their level of agreement with the statement: "The independent accountant's verification (assurance) of greenhouse gas emissions increased the credibility of results reported by TWBC" (endpoints Strongly Disagree, -3, and Strongly Agree, +3). The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.186$), nor a significant main effect for assurance ($p = 0.362$). However, there is a moderately significant main effect for performance ($p = 0.054$). I ran pairwise comparisons to investigate the performance main effect and found that participants agreed with this statement more in the positive rather than negative performance condition ($p = 0.099$). See Panels A through C of Table 23 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate this finding I ran a Mann-Whitney U test, but results were no longer statistically significant ($p = 0.157$). See Panel A of Table 24 for the Mann-Whitney U test, and Panel A of Figure 12 for plotted results. These findings suggest that participants did not believe assurance increased the credibility of reported greenhouse gas emissions differently across the conditions studied.

The fourth and final of the additional dependent variables asked participants to use a 7-point Likert scale to indicate their level of agreement with the statement: "TWBC's results of

greenhouse gas emissions are more believable because of the verification (assurance) provided by an independent accountant" (endpoints Strongly Disagree, -3, and Strongly Agree, +3). The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.224$), nor a significant main effect for assurance ($p = 0.258$) or performance ($p = 0.129$). See Panels A and B of Table 25 for related descriptive statistics and ANOVA output, and Panel A of Figure 13 for plotted results. These results suggest that the believability of reported greenhouse gas emissions did not differ across the conditions studied.

Results for these additional dependent variables provide insight into why no significant differences between groups were identified by the primary dependent variable related to credibility of disclosures. While users believed management would obtain assurance to enhance the credibility of disclosures moreso in the positive rather than in the negative performance condition, there were no significant differences between groups when asked directly whether assurance increased the credibility or believability of disclosures. These findings indicate that users believe management's decision to obtain assurance varies based on firm performance. However, these findings also indicate users do not believe that the influence of assurance on disclosure credibility or believability differs based on level of assurance or firm performance. The lack of variation in users' assessments of the influence of assurance helps explain why disclosure credibility (as a primary dependent variable) did not vary significantly between groups.

4.7.7 Supplemental Condition – No Assurance

Based on results to this point, significant differences appear to be concentrated in a subset of cells across *firm CSR performance* (positive, negative) and *assurance provided* (limited assurance, reasonable assurance). To examine these differences more closely and offer more

context to the results, I modified my original experimental design and collected additional data from new participants. Specifically, I added a no assurance group to the *assurance provided* condition, removed the two hybrid groups from the *assurance provided* condition, and removed the neutral group from the *firm CSR performance* condition. This resulted in a 2 x 3 experimental design with manipulations of *firm CSR performance* (positive, negative) and *assurance provided* (no assurance, limited assurance, reasonable assurance). Next, I explain the new experimental design and develop additional hypotheses for testing specific to the updated model.

Findings to this point indicate that hybrid assurances are generally perceived as a middle-ground between reasonable and limited assurance. However, participants' perceptions of the reliability of representations reveals a surprising effect: representations are perceived as more reliable with reasonable assurance than limited assurance in the negative performance condition, but this reverses in the positive performance condition. Results also show that the reliability of representations with reasonable and limited assurance are perceived differently in positive and negative performance conditions, but the difference for limited assurance (planned contrast $p = 0.015$; Mann-Whitney $p = 0.032$) is more significant than that of reasonable assurance (planned contrast $p = 0.185$; Mann-Whitney $p = 0.061$). Results, therefore, suggest that an attribute of limited assurance may be driving the change in perceived reliability when in a positive or negative performance condition.

Limited assurance reports include a statement that: "A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion." (AICPA 2015c, 32). A similar statement is not present in reasonable assurance reports (AICPA 2015b). Therefore, while both

reasonable and limited reports make it clear that assurance of CSR disclosures is being provided, only the limited assurance report highlights the fact that a higher level of assurance exists and was not obtained for the current report.

Given the early stages of assured CSR reporting in the U.S., it is reasonable to assume that users of CSR reports may not know that assurance of related disclosures is an option. If CSR report users in the U.S. do not know assurance is available for such reporting, they may not question the reliability of CSR disclosures in the absence of assurance. However, when they are aware that assurance is an option, they may react differently when they discover a higher level of assurance was available, but not obtained (i.e., limited assurance) as opposed to when they only see one level of assurance, which coincidentally is the highest level of assurance (i.e., reasonable assurance). I therefore expect that no assurance acts in much the same way as reasonable assurance, particularly in a market like the U.S. where assured CSR reporting is not yet prominent. Formally, I predict that:

H4a: In the positive performance condition there will not be a difference in the perceived reliability of disclosures when reasonable assurance or no assurance is provided.

H4b: In the negative performance condition there will not be a difference in the perceived reliability of disclosures when reasonable assurance or no assurance is provided.

If no assurance behaves like reasonable assurance in a U.S. CSR setting, then the same differences identified between reasonable and limited assurance in my original experiment should also be found between no assurance and limited assurance. Specifically:

H5a: In the positive performance condition, users will perceive disclosures to be more reliable when limited rather than no assurance is provided.

H5b: In the negative performance condition, users will perceive disclosures to be less reliable when limited rather than no assurance is provided.

4.7.7.1 Research Design, Experimental Materials, Dependent Variables, and Participants

I addressed the above supplemental hypotheses using a 2 x 3 experimental design in which *firm CSR performance* (positive, negative) and *assurance provided* (no assurance, limited assurance, reasonable assurance) were manipulated between participants. Additional data were gathered for the no assurance cells only, as the previously collected data from all other cells remained applicable. The experimental materials were the same as those used in the original experiment, but the independent accountant's reports and dependent variable questions about the assurance provided were removed. See Appendix AA for all relevant updates to the experimental materials. The experiment was conducted online using Qualtrics.

Participants were recruited through MTurk, and met the same user attributes as in the original experiment to proxy for CSR report users. In total, 122 additional MTurk Workers were recruited. To remain consistent with the original experiment, each of the 122 additional participants was paid $2.50 to complete the experiment, which had an average duration of 29 minutes. This resulted in an effective hourly rate of $5.18, well above the effective hourly rate of $3.75 documented in Rennekamp (2012) but less than the effective hourly rate paid across all participants in my original data collection ($5.98).

Not all 122 participants in the no assurance condition could be / were used in the final sample. Participants were removed for the following reasons: (1) having already served as a participant in my original experiment (n = 3); (2) not having a Worker ID appear in the MTurk

output (n = 2); and (3) not correctly identifying the firm as having positive or negative performance as compared to the industry average (n = 13). In addition, I collected data on the neutral performance condition, but did not use those 37 responses in this part of the analysis because the updated experiment focused on positive and negative performance groups, and the original analyses failed to identify the neutral group as a source for significant differences. The remaining no assurance sample included 67 responses with an average completion time of 26.3 minutes (low = 6.4 minutes; high = 70.9 minutes) for an effective hourly rate of $5.70 per participant. This is nearly identical to the effective hourly rate paid for participants with usable responses in my original data collection ($5.68).

Demographic information about participants is provided on Panel B of Table 3. Of the accepted participants: (1) 58.51% were male and 41.49% were female, (2) 41.49% were between the age of 35-54 and another 35.11% were between 26-34, (3) 50.00% had at least a four-year college degree, (4) 95.74% learned to speak English at less than five years old, (5) 55.93% were working a full-time job while another 16.10% were working part-time, and (6) 19.39% classified their work as "office and administrative support" and another 13.27% as "professional and related."

Panel B of Table 3 also includes a comparison of accepted participants for the no assurance condition vs. those accepted for the original experiment and whether that difference is significant. The accepted no assurance sample has a higher proportion of participants who (1) were between the ages of 35-54, (2) earned a 2-year college degree, and (3) worked in construction and extraction ($p < 0.05$). However, the accepted no assurance sample also has a lower proportion of participants who have earned a postgraduate degree ($p < 0.05$). These differences did not raise concerns about the final accepted sample, as I am not aware of any

research that indicates differences in the listed attributes would lead to experimental differences. However, the higher proportion of participants that worked in construction and extraction may (intuitively) indicate a group more environmentally minded. To address this possibility, I ran all tests of hypotheses H4a, H4b, H5a and H5b both with and without participants that have worked in construction and extraction (i.e., all related ANOVAs, tests of contrasts and non-parametric procedures). Results of hypotheses testing are quantitatively and qualitatively similar when the construction and extraction group is included vs. excluded from the sample.

4.7.7.2 Preliminary Analyses

Prior to testing the supplemental hypotheses, I graphed the means for each cell based on my dependent variables. See Panel B in Figures 3 through 13. The primary dependent variable for this series of analyses asked about the reliability of representations made in the CSR report; see Panel B of Figure 4. Based on a visual inspection of Panel B in Figure 4, my predictions appear to be accurate in that no assurance has similar results as reasonable assurance in both the positive and negative performance conditions. Also consistent with my predictions, the reliability of representations appears to be different when no assurance or limited assurance is provided in both the positive and negative performance conditions. While a visual inspection of Figure 4 (Panel B) provides insight into the pattern and direction of responses across groups, it is not sufficient to identify statistically significant differences.

Also prior to hypothesis testing, I performed a two-way ANOVA on the reliability of representations dependent variable. See Panels A and B of Table 26 for related descriptive statistics and ANOVA results. The ANOVA output shows a significant interaction between assurance and performance ($p = 0.002$), but no significant main effects for assurance ($p = 0.909$) or performance ($p = 0.706$). I investigated the significant interaction by running pairwise

comparisons and found representations were perceived as more reliable: (1) with limited assurance in a positive rather than negative performance condition ($p = 0.010$), (2) with no assurance in a negative rather than positive performance condition ($p = 0.039$), (3) in negative performance with no assurance rather than limited assurance ($p = 0.054$), (4) in negative performance with reasonable rather than limited assurance ($p = 0.069$), and (5) in positive performance with limited rather than no assurance ($p = 0.063$). See Panel C of Table 26 for complete pairwise results.

Because the reliability dependent variable failed the normal distribution and homogeneity of variance ANOVA assumptions, I also performed nonparametric Mann-Whitney U tests to corroborate parametric findings. I again found that representations were perceived as more reliable: (1) with limited assurance in a positive rather than negative performance condition ($p = 0.032$), (2) with no assurance in a negative rather than positive performance condition ($p = 0.056$), (3) in negative performance with no assurance rather than limited assurance ($p = 0.077$), (4) in negative performance with reasonable rather than limited assurance ($p = 0.058$), and (5) in positive performance with limited rather than no assurance ($p = 0.029$). See Panels A, B, D, F, and I of Table 27. The results of nonparametric tests are largely consistent with those described above for parametric tests.

4.7.7.3 Tests of H4a

Hypothesis 4a predicts no difference in the reliability of representations when reasonable or no assurance is provided in a positive performance condition. While ANOVA results suggest there is no difference, I perform a test of contrasts between the means of these two cells (see Panel D of Table 26). Results show no difference in the reliability of representations when reasonable or no assurance is provided in a positive performance condition ($p = 0.749$). To

corroborate these results, I performed the same comparison using a nonparametric Mann-Whitney U test and again find no difference ($p = 0.893$). See Table 27, Panel J.

Taken together, these results indicate that the null hypothesis in H4a cannot be rejected and suggest that users do not perceive a difference in the reliability of representations when reasonable or no assurance is provided in a positive performance condition.

4.7.7.4 Tests of H4b

Hypothesis 4b predicts no difference in the reliability of representations when reasonable or no assurance is provided in a negative performance condition. While ANOVA results suggest there is no difference, I perform a test of contrasts between the means of these two cells (see Panel D of Table 26). Results show no difference in the reliability of representations when reasonable or no assurance is provided in a negative performance condition ($p = 0.873$). To corroborate these results, I performed the same comparison using a nonparametric Mann-Whitney U test and again find no difference ($p = 0.874$). See Table 27, Panel C.

Taken together, these results indicate that the null hypothesis in H4b cannot be rejected and suggest that users do not perceive a difference in the reliability of representations when reasonable or no assurance is provided in a negative performance condition.

4.7.7.5 Tests of H5a

Hypothesis 5a predicts users will perceive representations to be more reliable when limited rather than no assurance is provided in a positive performance condition. While ANOVA results already suggest there is a difference (pairwise comparison $p = 0.063$, two-tailed; Mann-Whitney $p = 0.029$, two-tailed), these results are actually stronger due to the directional prediction (i.e., pairwise comparison $p = 0.032$, one-tailed; Mann-Whitney $p = 0.015$, one-tailed). I then performed a test of contrasts between the means of these two cells (see Panel D of

Table 26). Results show a significant difference in the reliability of representations when limited rather no assurance is provided in a positive performance condition ($p = 0.011$, one-tailed). This finding is corroborated by the aforementioned nonparametric Mann-Whitney U test ($p = 0.015$, one-tailed); see Table 27, Panel I.

Taken together, these results support my prediction in H5a, that users perceive representations to be more reliable when limited rather than no assurance is provided in a positive performance condition.

4.7.7.6 Tests of H5b

Hypothesis 5b predicts users will perceive representations to be more reliable when no assurance rather than limited assurance is provided in a negative performance condition. While ANOVA results already suggest there is a difference (pairwise comparison $p = 0.054$, two-tailed; Mann-Whitney $p = 0.077$, two-tailed), these results are stronger due to the directional prediction (i.e., pairwise comparison $p = 0.027$, one-tailed; Mann-Whitney $p = 0.039$, one-tailed). I then performed a test of contrasts between the means of these two cells (see Panel D of Table 26). Results show a significant difference in the reliability of representations when no assurance rather limited assurance is provided in a negative performance condition ($p = 0.009$, one-tailed). This finding is corroborated by the aforementioned nonparametric Mann-Whitney U test ($p = 0.039$, one-tailed); see Table 27, Panel B.

Taken together, these results support my prediction in H5b, that users perceive representations to be more reliable when no assurance rather than limited assurance is provided in a negative performance condition.

4.7.7.7 No Assurance - Results for Remaining Dependent Variables

After testing the supplemental no assurance hypotheses, I analyzed the other dependent variables (i.e., those reported in the original experiment) in the updated 2 x 3 experimental design using a two-way ANOVA. I did not make any specific predictions for these variables. Unless otherwise noted, each variable failed either the normal distribution or homogeneity of variance ANOVA assumption (or both); as such, I performed nonparametric Mann-Whitney U tests to corroborate parametric findings.

Perceived Disclosure Credibility

The ANOVA output for responses to "How credible do you find TWBC's disclosures about greenhouse gas emissions?" indicates a significant interaction between assurance and performance ($p = 0.029$), but no significant main effect for assurance ($p = 0.857$) or performance ($p = 0.526$). I ran pairwise comparisons to investigate the significant interaction and found disclosures were perceived as more credible with no assurance in a negative rather than positive performance condition ($p = 0.017$) and with no assurance rather than limited assurance in a negative performance condition ($p = 0.075$). See Panels A through C of Table 28 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found a difference in perceptions of disclosure credibility between negative and positive performance conditions with no assurance ($p = 0.015$), but failed to find a difference between no assurance and limited assurance in a negative performance condition ($p = 0.183$). See Panels B and F of Table 29 for Mann-Whitney, and Panel B of Figure 3 for plotted results. These findings indicate that users perceive a difference in disclosure credibility when a firm has positive or negative performance and does not obtain assurance on CSR disclosures.

Perceptions of Management

The first dependent variable on perceptions of management asked participants to use a 7-point Likert scale (endpoints Strongly Disagree, -3, and Strongly Agree, +3) to indicate their level of agreement with the statement: "I believe that TWBC's management team is credible." ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.294$), nor a significant main effect for assurance ($p = 0.638$) or performance ($p = 0.328$). I therefore did not perform further analyses on this dependent variable. See Panels A and B of Table 30 for related descriptive statistics and ANOVA output, and Panel B of Figure 5 for plotted results.

The second dependent variable on perceptions of management asked participants to use the same 7-point Likert scale to indicate their level of agreement with the statement: "I believe that TWBC's management team is forthcoming." The ANOVA output shows there is a moderately significant interaction between assurance and performance ($p = 0.055$), but not a significant main effect for assurance ($p = 0.906$) or performance ($p = 0.855$). I ran pairwise comparisons to investigate the significant interaction and found that management was perceived to be more forthcoming in negative rather than positive performance conditions when no assurance was provided ($p = 0.057$). See Panels A through C of Table 31 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate this finding, I ran a Mann-Whitney U test and again found that management was perceived to be more forthcoming in negative rather than positive performance conditions when no assurance was provided ($p = 0.045$). See Panel A of Table 32 for the Mann-Whitney U test, and Panel B of Figure 6 for plotted results.

The third and final dependent variable on perceptions of management asked participants to use the same 7-point Likert scale to indicate their level of agreement with the statement: "I believe that TWBC's management team is trustworthy." The ANOVA output shows there is not a significant interaction between assurance and performance ($p = 0.251$), nor a significant main effect for assurance ($p = 0.317$) or performance ($p = 0.490$). I therefore did not perform further analyses on this dependent variable. See Panels A and B of Table 33 for related descriptive statistics and ANOVA output, and Panel B of Figure 7 for plotted results.

In general, these findings indicate that perceptions of management are stable based on the level (or lack) of assurance and firm CSR performance. However, management may be perceived as more forthcoming in a negative rather than positive performance condition when assurance is not provided.

Investment Opportunity

To measure the attractiveness of TWBC as a potential investment opportunity, I provided participants a 7-point Likert scale (endpoints Very Bad, -3, and Very Good, +3) and asked: "How attractive do you find TWBC as a potential investment opportunity?" The ANOVA output shows a moderately significant interaction between assurance and performance ($p = 0.055$), and a significant main effect for assurance ($p = 0.020$) and performance ($p < 0.001$). I ran pairwise comparisons to investigate the significant interaction and found that TWBC was a more attractive investment opportunity in the positive rather than negative performance condition with limited ($p < 0.001$), reasonable ($p < 0.001$), or no assurance ($p < 0.001$). Further, TWBC was a more attractive investment opportunity in the negative performance condition with limited rather than no assurance ($p = 0.004$) and with reasonable rather than no assurance ($p = 0.054$). See Panels A through C of Table 34 for related descriptive statistics, ANOVA output, and pairwise

comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found that TWBC was a more attractive investment opportunity in the positive rather than negative performance condition with limited ($p < 0.001$), reasonable ($p < 0.001$), or no assurance ($p < 0.001$), and in the negative performance condition with limited rather than no assurance ($p = 0.006$) and with reasonable rather than no assurance ($p = 0.042$). See Panels A through E of Table 35 for Mann-Whitney, and Panel B of Figure 8 for plotted results. These findings indicate that firms with better CSR performance are perceived as more attractive investment opportunities than firms with lesser CSR performance, and that assurance (limited or reasonable) provides for more comfort in making an investment decision as opposed to no assurance when firm CSR performance is negative.

Perceived Level of Verification

To measure the perceived level of verification, I provided participants a 7-point Likert scale (endpoints Zero Verification (Assurance), 0, and Absolute Verification (Assurance), 6) and asked: "Please indicate the level of verification (assurance) you perceive from the independent accountant's report provided on TWBC's 2014 Environmental Sustainability Report." As this question relates to the independent accountant's report, it was not included in the no assurance condition; analyses therefore reflect a 2 x 2 with manipulations to *firm CSR performance* (positive, negative) and *assurance provided* (reasonable, limited). The ANOVA output shows a moderately significant interaction between assurance and performance ($p = 0.072$), and moderately significant main effects for assurance ($p = 0.090$) and performance ($p = 0.067$). I ran pairwise comparisons to investigate the significant interaction and found the perceived level of verification to be higher with limited assurance when firms have positive rather than negative CSR performance ($p = 0.008$) and when firms obtain reasonable rather than limited assurance in

a negative performance condition (p = 0.014). See Panels A through C of Table 36 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found the perceived level of verification to be higher with limited assurance when firms have positive rather than negative CSR performance (p = 0.023) and when firms obtain reasonable rather than limited assurance in a negative performance condition (p = 0.022). See Panels A and B of Table 37 for Mann-Whitney U tests, and Panel B of Figure 9 for plotted results. These findings highlight that perceived levels of verification are higher in the positive rather than negative performance condition with limited assurance, and that more verification is perceived from reasonable than limited assurance in the negative performance condition.

Remaining Dependent Variables

Four additional dependent variables were used to analyze participants' reactions to levels (or lack) of assurance and firm CSR performance. The first of these additional dependent variables asked participants to use a 7-point Likert scale to indicate their response to: "How confident are you that Tasty Water Beverage Company's 2014 Environmental Sustainability Report represents the true performance of the company with respect to greenhouse gas emissions?" (endpoints Strongly Not Confident, -3, and Strongly Confident, +3). The ANOVA output shows a significant interaction between assurance and performance (p = 0.003), but not significant main effects for assurance (p = 0.940) or performance (p = 0.427). I ran pairwise comparisons to investigate the significant interaction and found that participants were more confident when firm performance was positive rather than negative with limited assurance (p = 0.061), but were more confident when performance was negative rather than positive with no assurance (p = 0.002). Further, participants were more confident with no assurance than with

limited assurance in the negative performance condition (p = 0.096), but were more confident with limited assurance than with no assurance in the positive performance condition (p = 0.021). See Panels A through C of Table 38 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found participants were more confident when performance was negative rather than positive with no assurance (p = 0.003) and with limited assurance rather than with no assurance in the positive performance condition (p = 0.004). However, I did not identify a difference in confidence between positive and negative firm performance with limited assurance (p = 0.321) or between limited and no assurance in the negative performance condition (p = 0.246). See Panels A through D of Table 39 for Mann-Whitney U tests, and Panel B of Figure 10 for plotted results. These findings suggest participants were more confident that the true results were presented in the negative performance condition and when limited rather than no assurance was provided in the positive performance condition.

The remaining three dependent variables relate to the independent accountant's report, which was not included in the no assurance condition. As such, analyses reflect a 2 x 2 with manipulations to *firm CSR performance* (positive, negative) and *assurance provided* (reasonable, limited).

The next dependent variables asked participants to use a 7-point Likert scale to indicate their level of agreement with the statement: "I believe that TWBC's management team had their greenhouse gas emission results externally verified (i.e., assured by an independent accountant) to increase the credibility of the reported results" (endpoints Strongly Disagree, -3, and Strongly Agree, +3). The ANOVA output shows there is not a significant interaction between assurance and performance (p = 0.230), nor a significant main effect for assurance (p = 0.879) or

performance (p = 0.547). I therefore did not perform further analyses on this dependent variable. See Panels A and B of Table 40 for related descriptive statistics and ANOVA output, and Panel B of Figure 11 for plotted results. These findings indicate that users do not vary in their beliefs that management would obtain assurance to enhance the credibility of CSR disclosures based on the applied manipulations.

I next asked participants to use a 7-point Likert scale to indicate their level of agreement with the statement: "The independent accountant's verification (assurance) of greenhouse gas emissions increased the credibility of results reported by TWBC" (endpoints Strongly Disagree, -3, and Strongly Agree, +3). The ANOVA output shows a significant interaction between assurance and performance (p = 0.011), but not a significant main effect for assurance (p = 0.305) or performance (p = 0.503). I ran pairwise comparisons to investigate the significant interaction and found that participants agreed with this statement more in the positive rather than negative performance condition with limited assurance (p = 0.017) and more with reasonable rather than limited assurance in the negative performance condition (p = 0.011). See Panels A through C of Table 41 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found that participants agreed with this statement more in the positive rather than negative performance condition with limited assurance (p = 0.052) and more with reasonable rather than limited assurance in the negative performance condition (p = 0.034). See Panels A and B of Table 42 for Mann-Whitney U tests, and Panel B of Figure 12 for plotted results. These findings identify the specific conditions that participants believed the independent accountant's report increased the credibility of CSR disclosures.

The final dependent variable asked participants to use a 7-point Likert scale to indicate their level of agreement with the statement: "TWBC's results of greenhouse gas emissions are more believable because of the verification (assurance) provided by an independent accountant" (endpoints Strongly Disagree, -3, and Strongly Agree, +3). The ANOVA output shows a significant interaction between assurance and performance ($p = 0.012$), but not a significant main effect for assurance ($p = 0.331$) or performance ($p = 0.584$). I ran pairwise comparisons to investigate the significant interaction and found that participants agreed with this statement more in the positive rather than negative performance condition with limited assurance ($p = 0.022$) and more with reasonable rather than limited assurance in the negative performance condition ($p = 0.013$). See Panels A through C of Table 43 for related descriptive statistics, ANOVA output, and pairwise comparisons. To corroborate these findings, I ran Mann-Whitney U tests and again found that participants agreed with this statement more in the positive rather than negative performance condition with limited assurance ($p = 0.033$) and more with reasonable rather than limited assurance in the negative performance condition ($p = 0.009$). See Panels A and B of Table 44 for Mann-Whitney, and Panel B of Figure 13 for plotted results. These findings identify the specific conditions in which participants asserted that CSR disclosures were more believable due to verification by an independent accountant.

4.7.7.8 No Assurance – Additional Questions

To motivate hypotheses H4a, H4b, H5a, and H5b I assumed that CSR report users in the U.S. may not have known that such information could be assured. Four questions were added to the no assurance condition to help determine the validity of my assumption. Although I did not include participants from the neutral performance, no assurance cell in the previous analyses, I do consider their responses to evaluate perceptions about assurance.

Participants in the no assurance condition did not see an independent accountant's report, but I asked each to "Please indicate the extent to which TWBC's greenhouse gas emissions were verified (i.e., assured)." The available 7-point scale included endpoints: 0 = No Verification (Assurance) and 6 = High Verification (Assurance). Results indicate that 87.23% (82/94) of participants believed the emissions had been verified to some extent (i.e., more than no verification). Furthermore, 73.40% (69/94) believed the emissions received at least medium verification (i.e., greater than or equal to 3 on the 0-6 scale). These findings suggest I was not correct to assume that participants were not aware CSR disclosures could be assured. Rather, participants believed the CSR disclosures had already been verified, which might more broadly suggest that participants believe publicly available information is assured prior to release.

Three questions probed into specifics about the assurance provider. Seventy-five of the ninety-four (79.79%) participants answered "Yes" when asked: "Would you expect TWBC to have their greenhouse gas emission information verified (i.e., assured) by a third party?" I then asked: "What third party, if any, would you expect TWBC to hire to verify (i.e., assure) the greenhouse gas emission they shared with you?" Responses indicated that 81.91% (77/94) believed the third party would be an environmental consultant, 7.45% (7/94) believed it would be an accountant/auditor, and 9.57% (9/94) did not expect TWBC to hire anyone to verify the greenhouse gas emissions.[29] I also asked participants how much they agreed with the statement: "TWBC's results of greenhouse gas emissions would be more believable if verified (i.e., assured) by an third party accountant" using a 7-point scale (endpoints Strongly Disagree, -3, and Strongly Agree, +3). The majority of respondents (93.26% or 83/89) indicated a positive level of agreement, disaggregated as agreeing slightly (11.24% or 10/89), somewhat (31.46% or 28/89),

[29] This sentence describes 93 of the 94 responses, as the remaining participant chose "other" and specified: "a Global Reporting Initiative (GRI) sponsored/verified contractor/tester, since those are the indicators being put forth."

or strongly (50.56% or 45/89). Collectively, these responses indicate that participants expected the greenhouse gas emissions to be assured by a third party, but that such party would be an environmental consultant. Still, most participants would find the disclosures to be more believable if assured by a third party accountant.

4.7.8 Reactions to Assurance Scope and Opinion/Conclusion Paragraphs

I performed an additional between-subjects experiment to investigate the influence of reasonable and limited assurance statements, specifically the opinion/conclusion and scope paragraphs. The goal of this additional experiment was to determine whether the limited or reasonable assurance conclusion/opinion paragraphs, with or without the scope paragraphs, drove differences in users' perceptions of disclosure reliability and perceived levels of assurance. In total, I recruited 80 additional participants using MTurk and required each to meet the same qualifications as defined for the preceding two experiments. The experimental materials appeared in Qualtrics and provided a brief background about a firm that reported greenhouse gas emission information that had been assured by an independent accountant. Participants then saw one of four descriptions of the assurance provided: (1) the limited assurance conclusion paragraph, (2) the limited assurance scope and conclusion paragraphs, (3) the reasonable assurance opinion paragraph, and (4) the reasonable assurance scope and opinion paragraphs. All assurance statements were those prescribed by the clarified U.S. attestation standards (AICPA 2015b, 2015c). Each participant then answered two questions:

1. Considering the statement provided by the independent accountant, how reliable would you find the company's reported greenhouse gas emissions? (9-point Likert scale with endpoints: -4, Absolutely Not Reliable and +4, Absolutely Reliable)

2. Based on the statement provided by the independent accountant, to what extent have the company's greenhouse gas emissions been assured (verified) by the independent accountant? (9-point Likert scale with endpoints: 0, Not Assured (Verified) and 8, Absolutely Assured (Verified))

See Appendix AB for the related experimental materials.

I used a one-way ANOVA and tests of contrasts to identify any significant differences between the four cells in this experiment. Prior to testing, I considered the relevant ANOVA assumptions of independent observations, normal distribution of the dependent variables, and homogeneity of variance (Keppel 1991, 97). Participants were randomly assigned to one of four conditions as part of the experimental design, and thus I achieved independence of observations. The two questions described above served as my dependent variables, and neither had responses that were normally distributed based on Kolmogorov-Smirnov and Shapiro-Wilk tests. Further, the results for the reliability question did not achieve homogeneity of variance based on the Levene test ($p = 0.048$), but did achieve this assumption based on the nonparametric Levene test ($p = 0.822$). As the data did not meet the normal distribution assumption, I corroborated all parametric findings with nonparametric Mann-Whitney U tests.

ANOVA results for the first dependent variable, reliability, did not identify a significant difference between the assurance statements ($p = 0.826$). I then performed tests of specific contrasts between the means of each cell, which required six unique comparisons to contrast the four cells against one another. Again, no significant differences were identified. See Panels A through C of Table 45 for related descriptive statistics, ANOVA output, and planned contrasts. Also see Figure 14 for plotted results. These results indicate that the perceived reliability of CSR

disclosures does not differ based solely on the limited and reasonable assurance scope and conclusion/opinion paragraphs.

ANOVA results for the second dependent variable, extent of verification, did not identify a significant effect between the assurance statements ($p = 0.234$). I then performed tests of specific contrasts between the means of each cell, which required six unique comparisons to contrast the four cells against one another. Here, I identified two moderately significant differences: participants believed the extent of verification from the independent accountant was higher when both the reasonable assurance scope and opinion paragraphs were presented than when the limited assurance conclusion ($p = 0.066$) or limited assurance scope and conclusion ($p = 0.091$) paragraphs were presented. See Panels A through C of Table 46 for related descriptive statistics, ANOVA output, and planned contrasts. To corroborate these findings, I ran Mann-Whitney U tests but failed to identify a significant difference between the reasonable assurance scope and opinion paragraphs with the limited assurance conclusion paragraph ($p = 0.122$). However, I again identified a moderately significant difference between the reasonable assurance scope and opinion paragraphs and the limited assurance scope and conclusion paragraphs ($p = 0.075$). See Panels A and B of Table 47 for Mann-Whitney U tests and Figure 15 for plotted results. These results provide limited evidence that the extent of verification is perceived to be higher when users read both the reasonable assurance scope and opinion paragraphs and lower when users read both the limited assurance scope and conclusion paragraphs.

CHAPTER FIVE

DISCUSSION, CONTRIBUTIONS, AND LIMITATIONS

5.1 Discussion

This research sought to determine the response of CSR report users to hybrid assurances on CSR disclosures. I included reasonable and limited assurance groups to place the responses to hybrid reports in context, and also manipulated firm CSR performance to identify the specific conditions in which users respond differently to assurance. For hybrids, I predicted the assured CSR disclosures would be perceived as less credible than if only reasonable or limited assurance had been provided (in a positive performance condition). Two other predictions included hybrids, but focused on the role of assurance in different performance conditions. Specifically, I predicted: (1) no difference in the perceived credibility of CSR disclosures in a negative firm performance condition across hybrid, reasonable, and limited assurance, and (2) negative performance disclosures would be perceived as more credible than positive performance disclosures with the level of assurance held constant. Finally, I predicted that users would perceive CSR disclosures to be more credible with reasonable rather than limited assurance in a positive performance condition.

Interestingly, I found no differences between any cells with perceived credibility as the dependent variable. I confirmed this lack of results through a series of analyses, which included: ANOVA, ANCOVA (with environmental attitudes as the covariate), planned contrasts, and nonparametric Mann-Whitney U tests. Based on my predictions, this finding of no differences supports H1a, which predicted no difference in perceptions of disclosure credibility between reasonable, limited, or hybrid assurances in a negative performance condition. However, I also

asked participants about the reliability of representations made in the CSR report, which lead to three key findings.

Findings for Reliability

My first key finding provides initial evidence that representations with hybrid assurance are perceived as more reliable than when reasonable assurance is provided, but less reliable than when limited assurance is provided, in the positive performance condition. This finding is supported by: (1) representations with limited assurance being perceived as more reliable than those with hybrid (limited assurance presented first) assurance (Table 9, nonparametric Mann-Whitney, $p = 0.097$), and (2) representations with hybrid (reasonable assurance presented first) assurance being perceived as more reliable than those with reasonable assurance (Table 9, nonparametric Mann-Whitney, $p = 0.052$). The pattern shown here also suggests that the second assurance described may be more influential as users try to determine the net level of assurance provided in hybrid reports. However, my prediction that CSR disclosures with hybrid assurance are perceived as less credible (reliable) than disclosures with only reasonable or limited assurance, was not supported.

The next key finding indicates that CSR disclosures are perceived as more reliable with limited rather than reasonable assurance in the positive performance condition (Table 8, planned contrast, $p = 0.115$; Table 9, nonparametric Mann-Whitney U, $p = 0.030$). This finding is also apparent in the pattern of hybrid results described above. Standard setters intend for reasonable assurance to convey more assurance than limited, so it is surprising that representations were perceived to be more reliable with limited rather than reasonable assurance. One possible explanation for this finding stems from users' attitudes towards management in positive vs. negative performance conditions. For questions about management's credibility and

trustworthiness, participant responses indicate management was perceived to be more credible (Table 10, pairwise comparison, $p = 0.014$; Table 11, nonparametric Mann-Whitney U, $p = 0.023$) and trustworthy (Table 14, pairwise comparison, $p = 0.029$; Table 15, nonparametric Mann-Whitney U, $p = 0.031$) in a positive rather than negative performance condition. Given management was perceived to be more credible and trustworthy in the positive performance condition, users may have found the limited assurance report to serve as a signal that disclosures were already reliable. Specifically, limited assurance reports provide that: "A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion." (AICPA 2015c, 32). A similar comparative statement is not included in reasonable assurance reports. When management is perceived as credible and trustworthy, a signal that additional assurance was not necessary might lead users to perceive CSR representations as more reliable with limited rather than reasonable assurance.

My final key finding indicates that CSR disclosures are perceived to be more reliable with reasonable assurance than with limited assurance in a negative performance condition (Table 8, planned contrast, $p = 0.033$; Table 9, nonparametric Mann-Whitney U, $p = 0.058$). Although these results support the goal of standard setters for reasonable assurance to convey more assurance than limited, Coram et al. (2009) found that assurance on nonfinancial performance indicators only impacted stock price estimates in a positive performance condition. One potential explanation for this difference between reasonable and limited assurance in the negative performance condition rests in the wording of the limited assurance report, as described above (most importantly, the limited assurance report specifies it is not the higher, reasonable

assurance report). Further, based on my findings in subsequent analyses (reported in section 4.7.7.8), 87.23% (82/94) of participants in the no assurance condition believed the CSR disclosures had been verified to some extent (i.e., more than no verification). As such, when users viewed the limited assurance report it should have been clear that (1) assurance was in-fact provided, and (2) a higher level of assurance could have been obtained. Specific to the negative performance condition, the idea that the firm could have pursued a higher level of assurance may have lead users to perceive disclosures with limited assurance were less reliable.

The net impact of my findings indicates that limited assurance reports, not hybrid assurance reports, provide an opportunity for the strongest contrasts to be made between reasonable and limited assurances. With hybrid assurances, users see the full description of both limited and reasonable assurance, and also see that the firm sought out the highest (i.e., reasonable) available assurance on some disclosures. In limited assurance reports, the verbiage is brief but clear that a higher level of assurance was available but not pursued by the reporting firm.[30] This knowledge that a higher level of assurance existed and was not sought out by the firm appears to provide users with the starkest contrast between levels of assurance, and thus has the strongest influence on perceptions of disclosure reliability. Such a finding is consistent with Low and Boo (2012) who show that the contrast statement in limited assurance reports (i.e., contrasts limited and reasonable assurance) improves users' understanding of the level of assurance being conveyed.

Difference in Responses to Credibility and Reliability

As described above, I failed to identify significant results with credibility as the dependent variable, but uncovered significant results with respect to the reliability of

[30] Although statements of limited assurance under ISAE (international) and the clarified U.S. attestation standards both make reference to a higher level of possible assurance (i.e., reasonable), a hybrid report should provide the strongest potential for users to contrast assurances as both levels are fully described (IAASB 2013a; AICPA 2015c).

representations made in the CSR report. In untabulated analyses, I used a dependent (paired sample) t-test and found, in total, credibility responses were higher than reliability responses (credibility mean = 1.7727; reliability mean = 1.6108; $t = 4.394$; $p < 0.001$). The standard deviation for credibility responses (1.12194) was also slightly lower than reliability (1.19075). These findings suggest participants found CSR disclosures to be more credible than reliable, and that there was less variation with credibility scores than with reliability scores.

Next, I considered the wording of the credibility and reliability dependent variable questions. Specifically, I asked:

1. How credible do you find TWBC's disclosures about greenhouse gas emissions?
2. How reliable do you find representations made in the Company's 2014 Environmental Sustainability Report?

The credibility question points participants more toward the detailed disclosures (i.e., the quantitative measure of greenhouse gas emissions), whereas the reliability question encourages consideration of the overall representations made in the report (i.e., the story about performance being better or worse than the industry). Using this interpretation, results indicate that participants found the greenhouse gas emission indicators to be similarly credible across all conditions (i.e., they believed the number of metric tons of carbon dioxide emissions reported), but vary more in terms of whether they rely on the message conveyed about TWBC's environmental performance and how this compared to the industry. It is likely that general CSR report users do not understand enough about the measurement of greenhouse gases to challenge the credibility of specific emissions reported, which is why I find less variability in reactions to the credibility of disclosures. However, I expect that CSR report users are adequately prepared to understand a general discussion about greenhouse gas emissions and the impact on the

environment, and would therefore have more varied reactions to broad representations a company makes about its emissions. This argument is supported by Marx et al. (2007) who reviewed research on people's processing of statistical information and concluded that analytical results are best understood when translated into concrete stories. These same authors go on to say that vivid descriptions overpower statistical information in that readers can more easily place themselves in the story. It is therefore reasonable that I obtained more varied responses and stronger statistical results when the dependent variable question directed participants to the overall story (i.e., reliability) as opposed to the specific levels of greenhouse gas emissions (i.e., credibility).

Supplemental Analysis – No Assurance

Finally, as detailed in section 4.7.7, I ran a supplemental experiment to collect responses for a no assurance condition. The goal of this experiment was to determine whether users responded differently to no assurance as opposed to limited or reasonable assurance in terms of the dependent variables used in the original analysis. I predicted that the reliability of representations with no assurance would be similar to reasonable assurance but different than limited assurance in both positive and negative performance conditions. As part of this analysis I found that 87.23% of participants believed the CSR disclosures had obtained some level of verification, even though no assurance statements had been presented. I then found no difference between reasonable and no assurance, but did find a significant difference between limited and no assurance in both the positive (Table 26, planned contrast, $p = 0.011$ one tailed; Table 27, nonparametric Mann-Whitney, $p = 0.015$ one-tailed) and negative (Table 26, planned contrast, $p = 0.009$ one-tailed; Table 27, nonparametric Mann-Whitney, $p = 0.039$ one-tailed) performance conditions. These findings indicated the users assumed that the CSR disclosures had been

verified, and when this assumption was confirmed with reasonable assurance, there is no difference in the reliability of representations. However, when this assumption was confirmed with limited assurance, the reliability of representations differed from when no assurance was provided. The finding that limited assurance triggers more pronounced reactions than reasonable (or no) assurance is consistent with Low and Boo (2012) who show that less informed users benefit from contrasting statements to distinguish between limited and reasonable assurances. Under the clarified U.S. attestation standards, limited assurance reports make reference to a higher level of assurance (i.e., reasonable) that was not pursued, while reasonable assurance reports make no such contrast.

5.2 Contributions

This study focused on the CSR assurance market in the U.S.[31] It was important to specifically address the U.S. market as Casey and Grenier (2015) found the U.S. CSR assurance market "fundamentally differs from international markets" in that higher levels of regulation (in their study, of financial and utilities firms) may be replacing the need for CSR assurance (p. 99). The experimental materials were based on SOP 13-1 and the applicable clarified U.S. attestation standards, and as such, results are rooted in the most recent U.S. guidance for assurance on CSR activities. Results should inform U.S. standard setters about user decision making when reasonable, limited, or hybrid assurances are provided on CSR disclosures. Specifically, the perceived reliability of management's CSR report can vary based on the level of assurance provided and the firm's relative CSR performance. Further, findings suggest that efforts to distinguish reasonable assurance from limited assurance have been effective in certain contexts.

[31] As previously described, an objective of the ASB's Attestation Clarity Project is to converge the U.S. attestation standards with ISAEs (AICPA 2014b). As such, certain findings from this study may be generalizable to the international CSR environment, but should be done so carefully and on a case-by-case basis.

Findings from this study help address a gap in the assurance literature related to hybrid assurances, as identified by Cohen and Simnett (2015). By manipulating reasonable, limited, and hybrid assurances between subjects, I provide context for how users respond to hybrid assurance as compared to other available levels of assurance in a CSR setting. My findings suggest that users do not perceive a difference in CSR disclosure credibility when reasonable, limited, or hybrid assurances are provided. However, I provide initial evidence that the reliability of CSR representations with hybrid assurance are either equivalent to or between reasonable and limited assurance. I also provide evidence that users contrast reasonable and limited assurance more when using a limited assurance report than when using a hybrid assurance report. As the accounting literature has not yet examined hybrid assurance reports and most standard setting bodies have not addressed the hybrid reporting format, results of my study have both practical and theoretical implications in establishing how users respond to hybrid assurances.

This study also identifies specific conditions in which users perceive differences in reasonable, limited, and no assurance. While Hodge et al. (2009) found CSR disclosures were perceived to be more credible and reliable when assured, they did not find similar differences between reasonable and limited assurance. However, I found representations were perceived as more reliable with reasonable or no assurance vs. limited assurance in a negative performance condition, and more reliable with limited assurance vs. reasonable or no assurance in a positive performance condition. These findings are informative to theory on the influence of assurance in different firm performance conditions (cf. Coram et al. 2009). Further, the finding that users respond differently to limited assurance in relation to reasonable and no assurance in both positive and negative performance conditions has meaningful practical implications, especially given that 72% of assured CSR reports receive limited assurance (KPMG 2013). Such findings

suggest that limited assurance may be sufficient for firms with positive CSR performance, but that reasonable assurance may have more value in a negative performance condition, especially for firms that have established a pattern of pursing assurance on CSR disclosures (i.e., when not obtaining assurance is not an option).

5.3 Limitations

The research design employed here has certain limitations that should be considered in developing future research. Below I discuss five limitations that are applicable to my study and any research that applies similar design choices. These five limitations include: (1) the complexity of the CSR intervention, (2) the use of single item dependent variables, (3) the use of MTurk participants, (4) the high manipulation check failure rate, and (5) the statistical power of the design.

Complex CSR Intervention

CSR reporting and the assurance of this reporting can be very involved and complex; I therefore had to make a number of critical design choices to apply this setting in my experimental materials. For example, I only developed one area within environmental CSR reporting: GHG emissions. This design choice was made because U.S. attestation standards for CSR reporting currently only provide guidance on GHG emissions via SOP 13-1 (AICPA 2013a). For similar reasons, this study did not consider other CSR areas such as social issues. While it is possible for firms to only disclose information on GHG emissions, anecdotal evidence suggests that environmental CSR reports typically contain more disclosures. With more disclosures comes more length and substance in a CSR report, whereas this study provided excerpts from such a report to focus the efforts of participants (cf. Hasan et al. 2003). This design choice may restrict the external validity of results, but a more lengthy and involved instrument

would likely have been problematic in an experimental setting (i.e., participant fatigue and time commitment). As discussed in section 3.1, Research Design and Experimental Materials, I also intentionally placed TWBC in the food and beverage industry as KPMG (2013) finds this industry performs at the global average in the quality and number of CSR reports issued. I intentionally avoided industries like mining and extraction so that responses would not be biased purely against an industry known for higher levels of pollution. Researchers in future studies should also be careful in selecting the industry of their chosen firm.

I also made critical design choices in the assurances provided by the accountant. As mentioned, the AICPA offers guidance on the presentation and wording to use in limited and reasonable assurance reports. However, no such guidance is provided for hybrid assurance reports. I elected to include both limited and reasonable assurances within the same independent accountant's report for the hybrid assurance conditions, as some evidence suggests this method is used most often in practice and that subject matter experts prefer this approach (Wieriks 2013). Indeed, other formats of hybrid assurance reports could have been used (i.e., separate independent accountant's reports for the different assurances), so results may not generalize to other hybrid assurance report formats. This limitation is unavoidable because the AICPA does not openly endorse a presentation and report format for hybrid assurances, but I followed the existing accounting research and used the method most likely to be encountered by CSR report users.

Finally, in establishing the experimental scenario, I incorporated several technical elements (i.e., CSR metrics and assurance reports) that likely made the manipulations less salient but also increased the external validity of my results. Less salient manipulations bias against finding results, and thereby add more weight to the significant differences actually identified. As

an additional point, because this was an experimental setting, participants may not have felt the presented GHG emissions had a real impact on the environment. This also biased against results if participants felt less of a connection to the experimental scenario.

Single Item Dependent Variables

Another possible limitation of my study was the use of single questions (items) to query each construct of interest (i.e., credibility of disclosures, reliability of representations, trustworthiness of management, etc.). In taking this approach, I was able to directly ask participants about the constructs of interest and minimize the number of questions asked, but simultaneously decreased my ability to create indices that could possibly provide more robust measures of the constructs and minimize related measurement errors. For example, my dependent variables about the credibility of disclosures and the reliability of representations are highly correlated (Pearson $r = 0.823$, $p < 0.001$; Spearman $\rho = 0.778$, $p < 0.001$) (see Table 48). While I provided an explanation and interpretation for how these items measured different constructs in section 5.1, Discussion, the high correlations suggest I might have picked up largely similar constructs with credibility and reliability. Further, there is likely measurement error in these single items, and once the downward influence of measurement error is corrected, the true relationship between credibility and reliability could possibly be even higher than the current correlations suggest. Using more questions to clearly differentiate constructs could reduce the error in measurements and provide for more robust constructs.

To further examine the use of single item dependent variables, I compiled a correlation matrix for all dependent variables used in this study. See Table 48 (the darker shaded cells represent those with higher correlations). I find high, but not perfect, correlations across three general categories: (1) questions about the information conveyed in management's report with

DV1, DV2, and DV4, (2) questions about perceptions of management with DV6, DV7, and DV8, and (3) questions about the impact of assurance on the reported information with DV11 and DV12. The high correlations within these categories suggest the single items may be picking up the same or similar constructs, which makes it more difficult to definitively conclude that each item measured a unique and independent construct. By using more items to measure each construct, it would have been more possible to delineate specific constructs.

Of interest, Table 48 also shows a high correlation among questions about the information conveyed in management's report (i.e., DVs 1, 2, and 4) and questions about perceptions of management (i.e., DVs 6, 7, and 8). This adds credibility to my previous argument in Section 5.1, Discussion, that impressions of management are associated with perceptions of reported information (i.e., credibility of disclosures and reliability of representations).

MTurk Participants

The use of MTurk to recruit participants is increasing in accounting research (Rennekamp 2012; Brandon et al. 2014; Koonce et al. 2015; Krische 2015). Based on my experience, there are several benefits and drawbacks of using this crowdsourcing tool. Some of the apparent benefits include the ease of access to a large participant pool, flexible participant requirements, low cost, fast response times, and ability to review responses and withhold payment from individual participants. MTurk also offers flexibility in the survey tools it can be linked to (in my case, Qualtrics), and provides detailed metrics on the users that participated in each study. While I decided not to use MTurk "Masters," this option may also be attractive to researchers interested in using a more specialized group of participants with a proven record of completed and accepted surveys.

Although the benefits of MTurk are attractive, researchers should also be cautious in using this resource. For example, while researchers can define the type of user that gains access to the study, such controls offered by MTurk are limited to a few basic requirements such as the participants' location and prior survey acceptance rate. Researchers must therefore be proactive in setting up additional qualifying questions in the survey tool they link to MTurk (i.e., level of education, work experience, age, etc.). Further, my interactions with a number of MTurk users indicate that the money they earn by completing surveys is not considered to be immaterial. Researchers should therefore be cautious and set up a number of questions to determine whether participants paid attention versus tried to complete the survey as fast as possible to earn a higher effective hourly wage. Along a similar line, researchers will never see an MTurk user face-to-face, so it is important to include a variety of demographic questions to have a strong understanding of the users that completed each survey. Finally, MTurk users rate the researcher, and based on several email exchanges with these users, it is apparent that a researcher's rating will impact his or her ability to attract large pools of participants in future studies. Researchers that plan to regularly use MTurk to recruit participants should therefore be cognizant that their interaction with individual users may have more widespread implications as this information is quickly shared and may impact a researcher's ability to attract large pools of future participants.

High Manipulation Check Failure Rate

A large number of MTurk participants in my original experiment failed the manipulation check question that asked whether the accountant provided the same verification (i.e., assurance) on all four greenhouse gas emission indicators. Specifically, 33.5% (246/734) of participants failed this question (see Table 2 for details). While participants were removed from the study for a number of different reasons (as detailed in Table 2), failing the manipulation check question

was the first cause to remove participants from the accepted sample. There are a number of reasons I may have observed such a high failure rate. For instance, participants may not have paid close enough attention to the experimental materials. I attempted to screen these participants from my final accepted sample, such that even those who guessed the correct answer to the manipulation check question would have been filtered out by missing one of the three comprehension check questions or the question on how the firm performed against the industry. Statistically, with such a large number of participants, a small portion could have qualified for my accepted sample purely by guessing the correct answer to these five questions. However, such instances should be random and limited, and therefore not highly influential on the means of any individual cell.

Another consideration for the high manipulation check failure rate is that the manipulations to firm performance and assurance provided were not salient enough for users to recognize. While these manipulations could have been made more salient to help users better understand the impact and significance of each, doing so would decrease the external validity of my results. Specifically, I designed my experimental materials based on an extensive review of actual published CSR reports and the presentation format of independent accountant's reports recommended by the AICPA (for limited and reasonable assurance reports). Therefore, the saliency of my manipulations largely reflects how CSR report users would encounter such details on firm performance and assurance provided in a real world setting. In doing so, I acknowledge and accept that low saliency may have contributed to low manipulation check passage rates. Such a problem is consistent with prior literature that finds a gap in the assurance communicated by accountants and then perceived by users (e.g., Hasan et al. 2005; Mock et al. 2009).

It is also true that the manipulation check question required participants to recognize both (1) the number of different assurances provided and (2) that these assurances were provided on greenhouse gas emission indictors. To achieve a higher passage rate, a simplified version of this question could have been posed that only required participants to recognize whether the independent accountant provided different assurances. While this may have resulted in a higher passage rate, it also could have qualified participants for the final accepted sample that did not fully understand that assurance(s) was provided on the greenhouse gas emission indicators. Although such participants might have been disqualified based on one of the comprehension check questions, those that passed would have diluted the quality of the final accepted sample.

Future research (and researchers) should consider the unique lessons in this study related to the high manipulation check failure rate for assurances provided by an accountant. Specifically, researchers may want to experiment with ways to make the assurance manipulations more salient while minimizing the associated threats to external validity. Researchers may also experiment with using more comprehension check questions to enhance the saliency of assurance provided, but carefully consider the impact and implications of the likely demand effects such an approach may create.

Sufficient Statistical Power

My final limitation deals with whether the tests performed in this study were sufficiently powered to identify the hypothesized or investigated differences. All of my hypotheses focused on testing the difference in means between two cells. Although I began the analysis of each dependent variable with a two-way ANOVA, all ANOVA results had to be corroborated with nonparametric Mann-Whitney U tests because my data failed one or more ANOVA assumptions (as documented throughout this study). As such, the findings in this study are primarily based on

nonparametric comparisons between the means of two independent groups. While I documented several statistically significant differences based on nonparametric tests, I also failed to identify expected differences in a number of cases. However, it is possible that non-significant differences were the result of not having sufficient power. I therefore examine whether the nonparametric tests used throughout this study had sufficient power to identify differences between group means.

A priori, I expected medium rather than large effect sizes for my dependent variables. I developed this expectation based on prior accounting experiments that examined differences in levels of assurance. Specifically, Hasan et al. (2003) had sufficient power to identify small effect sizes, and they found significant differences in perceptions of the amount of assurance conveyed between moderate and high assurance reports. However, Hodge et al. (2009) only had sufficient power to identify large effect sizes, and they consequently failed to find significant differences in the credibility and reliability of disclosures with limited and reasonable assurance. While these studies provide a theoretical backdrop for my expectation of effect sizes, I also calculated (post hoc) my actual observed effect sizes.

It is appropriate to use standardized differences (i.e., Cohen's d) to examine effect sizes when comparing the means of two independent groups. By conventional standards, a medium effect size is d = 0.5 (Cohen 1992). To substantiate my expectation for medium sized effects, I examined several of the Mann-Whitney U tests performed in my supplemental analyses related to the reliability of representations. Here, I predicted there would be differences between limited and no assurance, and based on observed cell means and standard deviations I found at least medium sized effects between limited and no assurance in both the positive (d = 0.7176) and negative (d = 0.5411) performance conditions. Further, I predicted there would be differences

between reasonable and limited assurance, and again found at least medium sized effects in both the positive (d = 0.7165) and negative (d = 0.5876) performance conditions. Of interest, I also predicted no differences between reasonable and no assurance, and found small effect sizes in both the positive (d = 0.0920) and negative (d = 0.0499) performance conditions. As such, medium effect sizes appear to be appropriate in my examination of power.

Next, I analyzed the power of nonparametric Mann-Whitney U comparisons made in this study. For consistency purposes, I stayed with tests performed on the reliability of representations performed in my supplemental analyses. Here, I had six cells with sample sizes of 18, 21, 22, 25, 33, and 34. See Tables 28 and 29. Even when comparing the two cells with the most participants (i.e., n = 33 and n = 34), I only achieved power of 0.503 when using a type I error rate (α) of 0.05 and assuming a medium effect size (i.e., d = 0.5).[32] I also used the actual observed effect size between these cells (d = 0.4966) and found the power to be 0.498. In both cases, the level of power was well below the conventional minimum of 0.8. The largest effect size within these cells (as discussed above) was found when comparing limited (n = 25) and no assurance (n = 33) in the positive performance condition (d = 0.7176). Using this relatively large effect size, the power is 0.738, still below the conventional minimum. These two examples, one with a high sample size and one with a high (observed) effect size, show that low power was likely an issue with nonparametric comparisons used in this study.

My findings related to the power of nonparametric tests suggest that comparisons of independent group means not shown to be statistically different may be the result of low power. Therefore, in this study, non-significant differences between groups should not be interpreted as all conclusive evidence that such a difference does not exist.

[32] Power analyses described in this section were performed using the G*Power application.

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FIGURE 1
FLOWCHART OF EXPERIMENTAL PROCEDURES

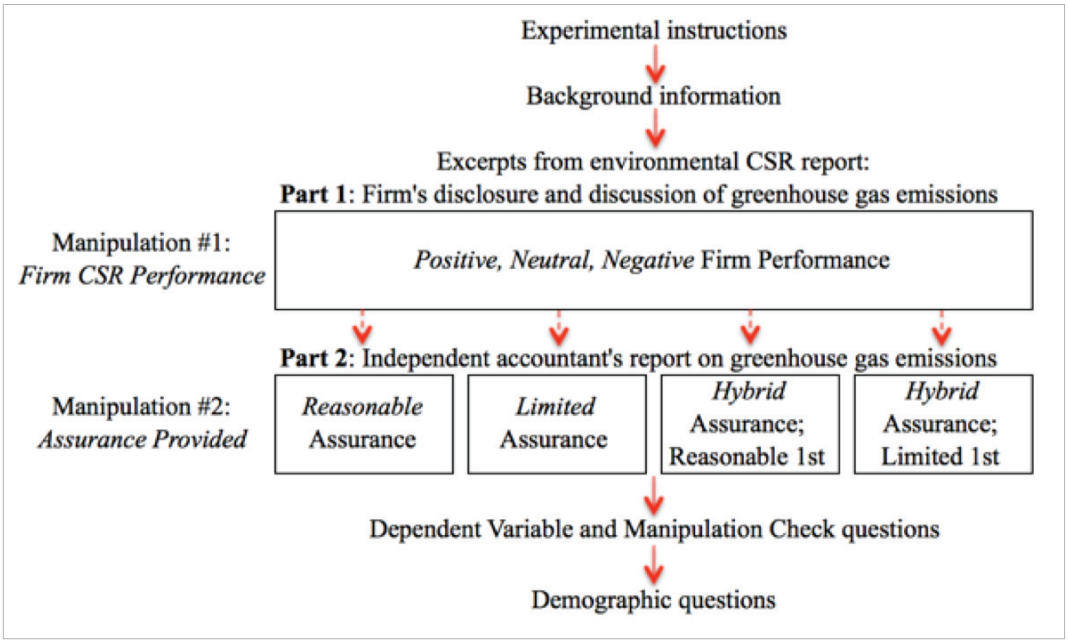


FIGURE 2
PREDICTED EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON PERCEIVED CREDIBILITY OF CSR DISCLOSURES

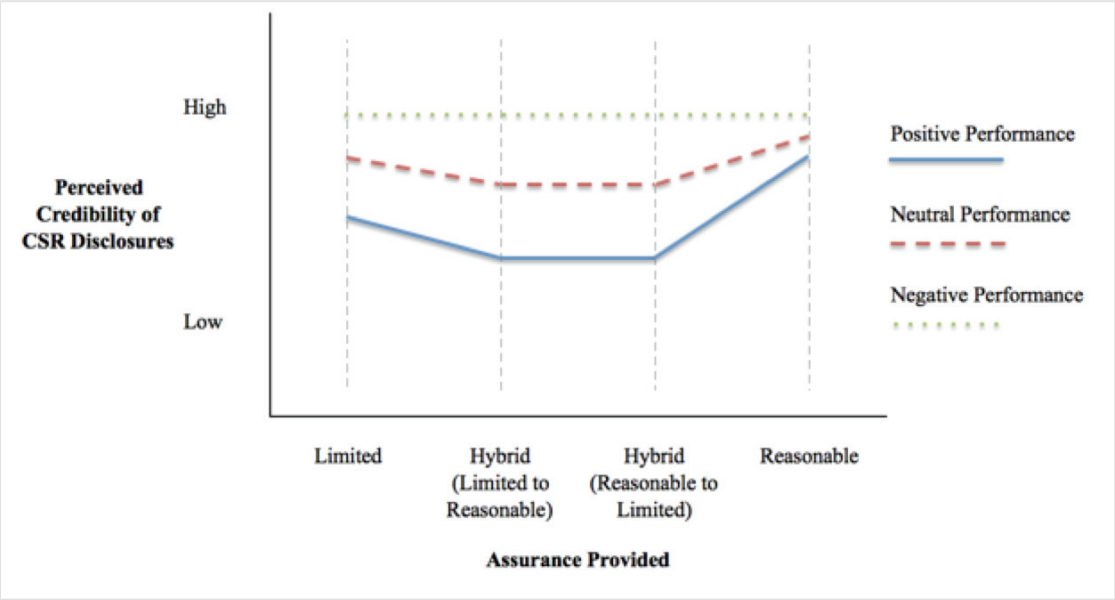
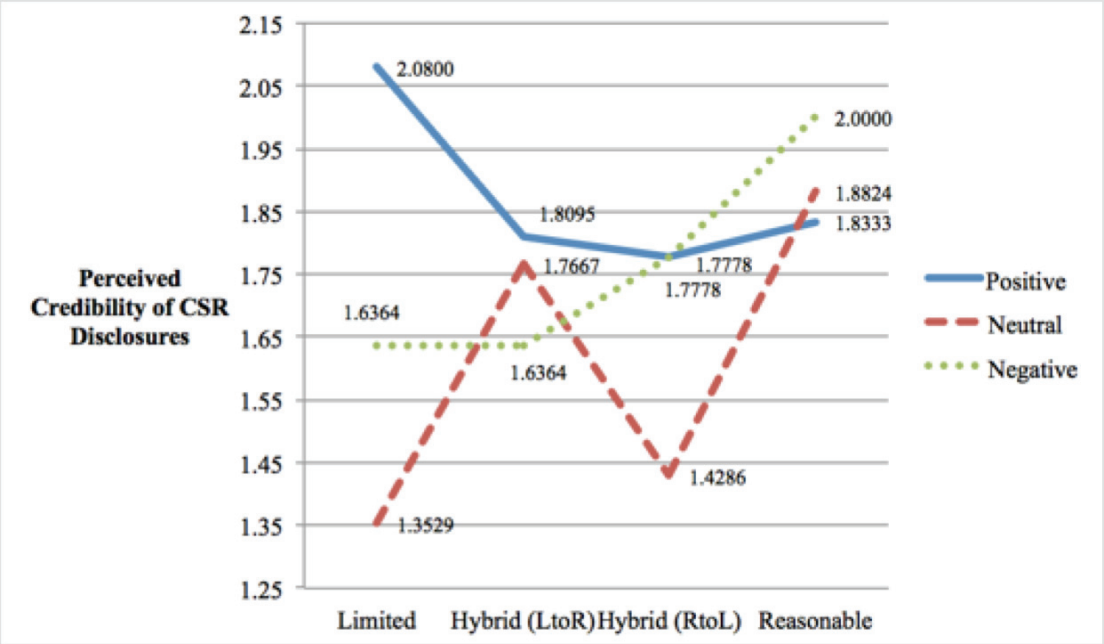


FIGURE 3
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON PERCEIVED CREDIBILITY OF CSR DISCLOSURES

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

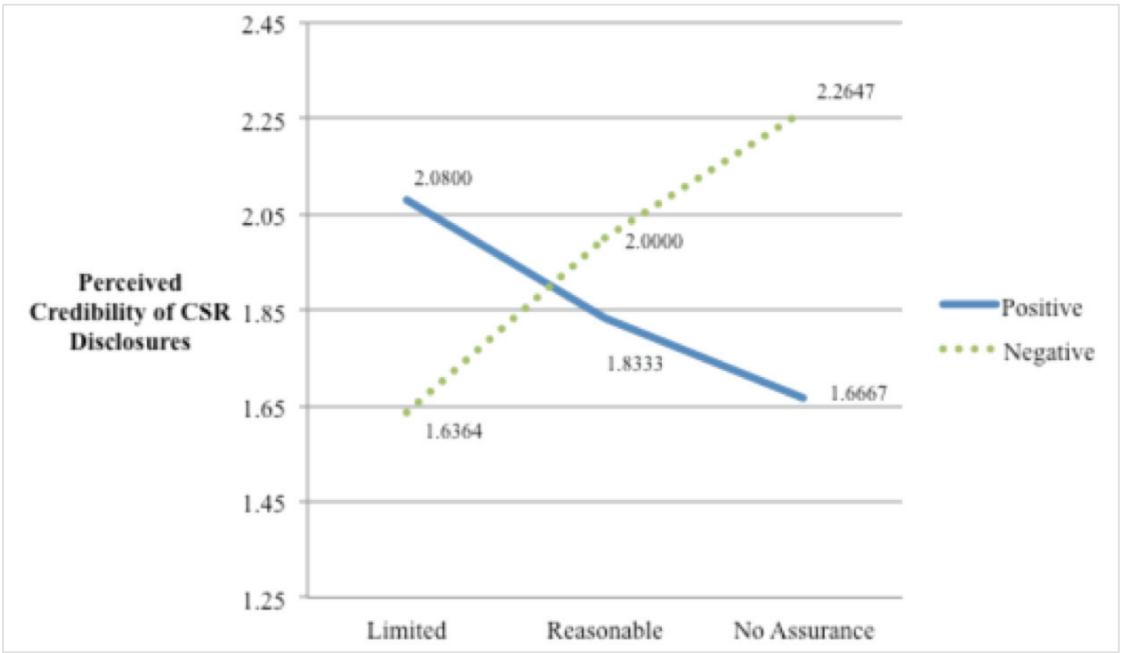
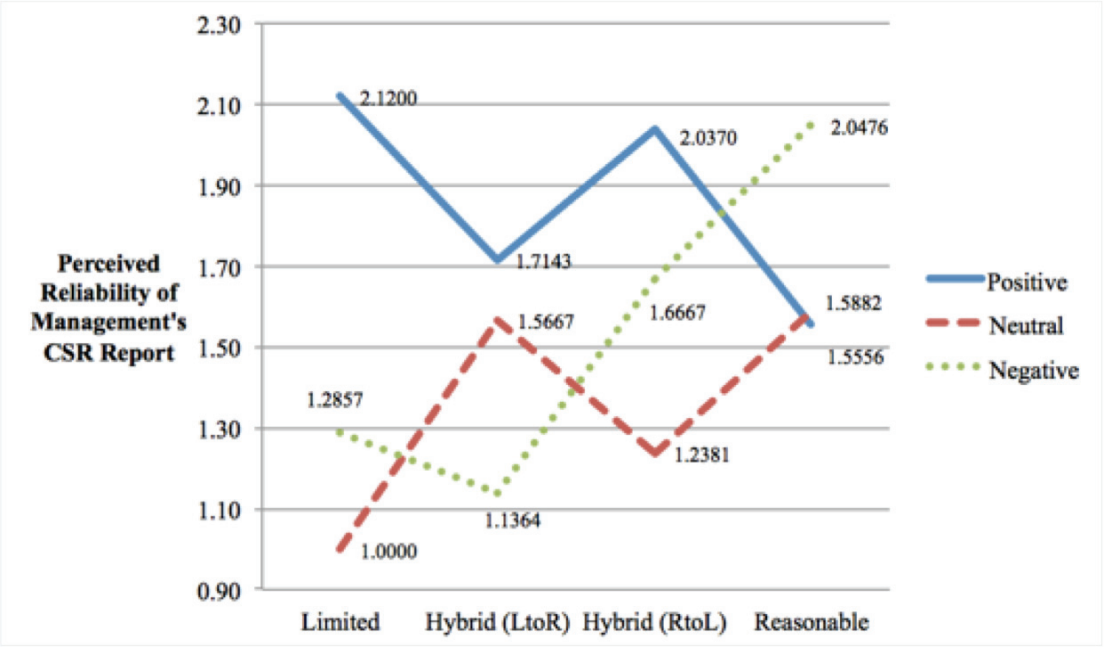


FIGURE 4
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON PERCEIVED RELIABILITY OF MANAGEMENT'S CSR REPORT

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

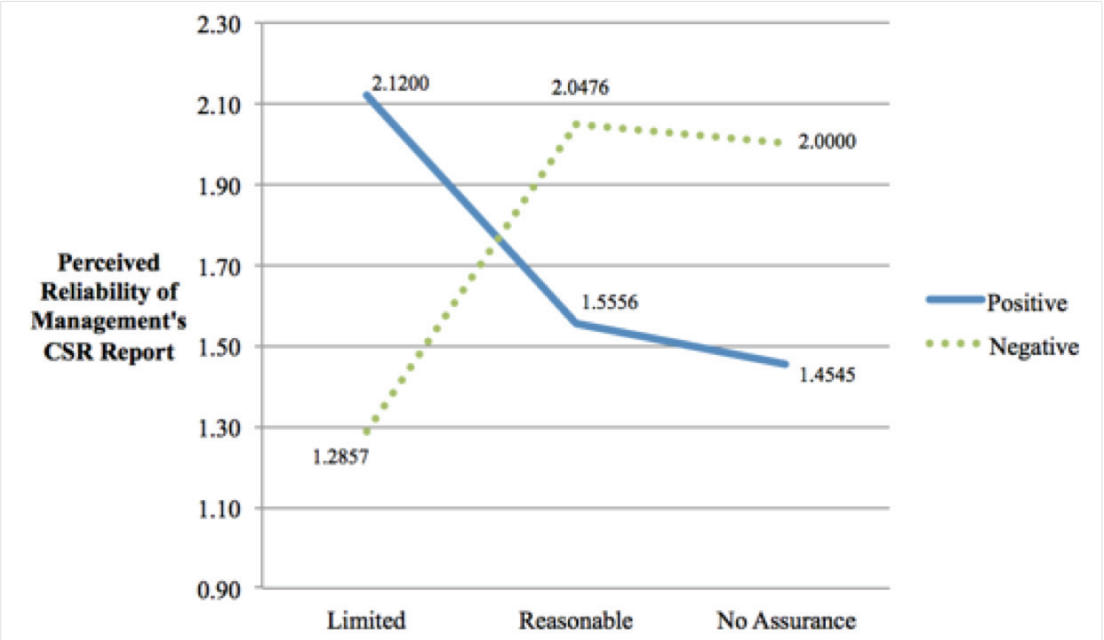
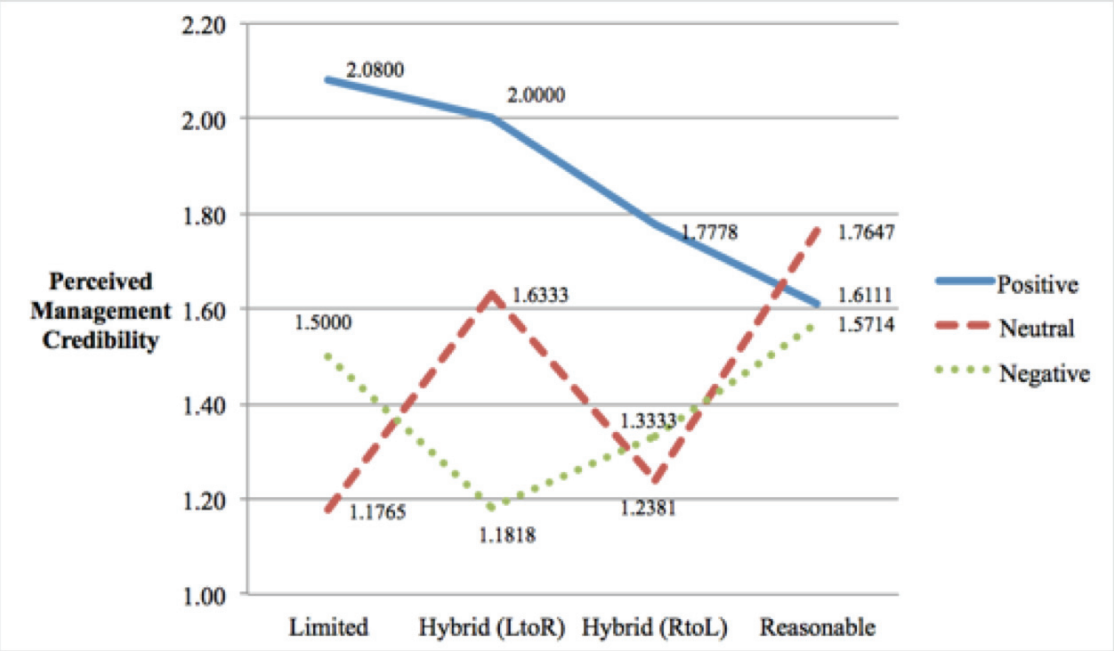


FIGURE 5
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON PERCEIVED MANAGEMENT CREDIBILITY

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

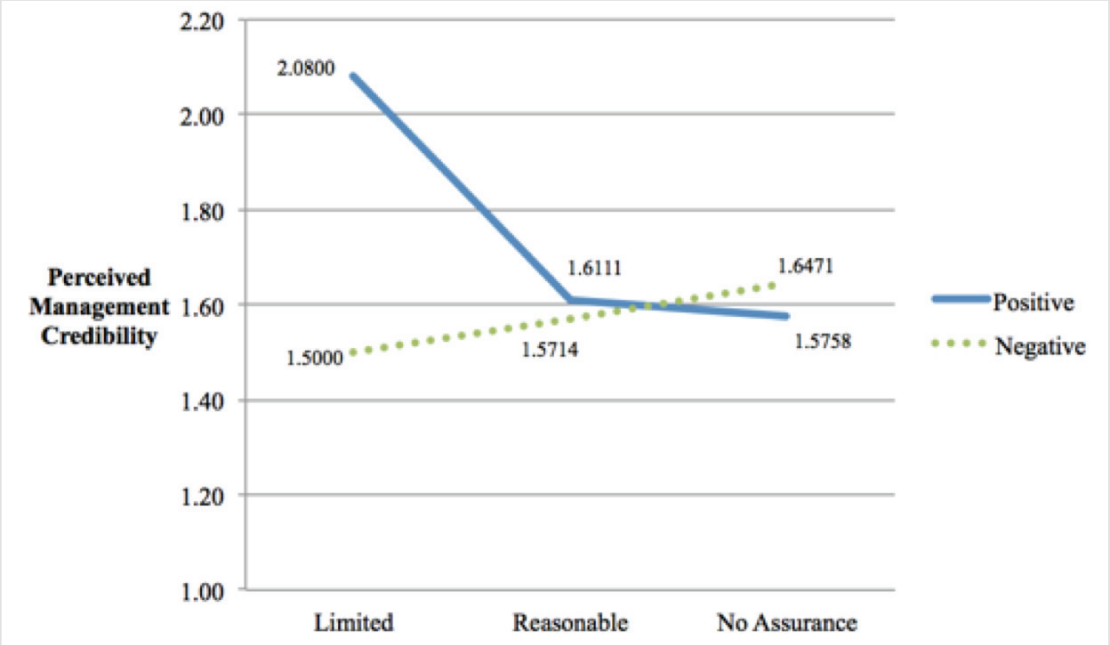
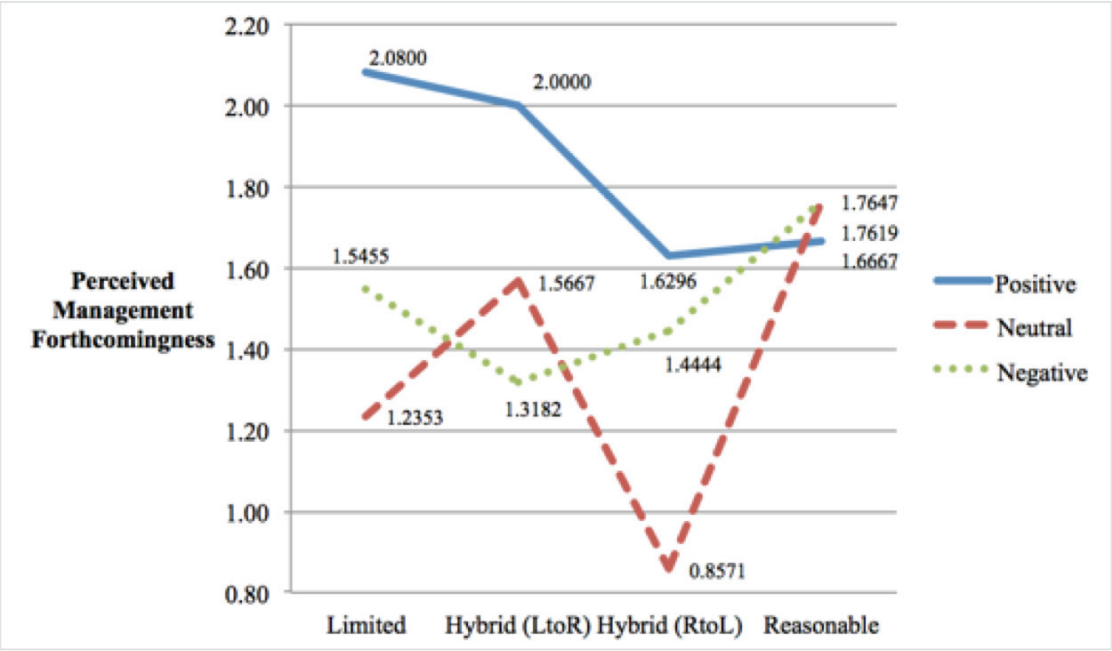


FIGURE 6
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON PERCEIVED MANAGEMENT FORTHCOMINGNESS

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

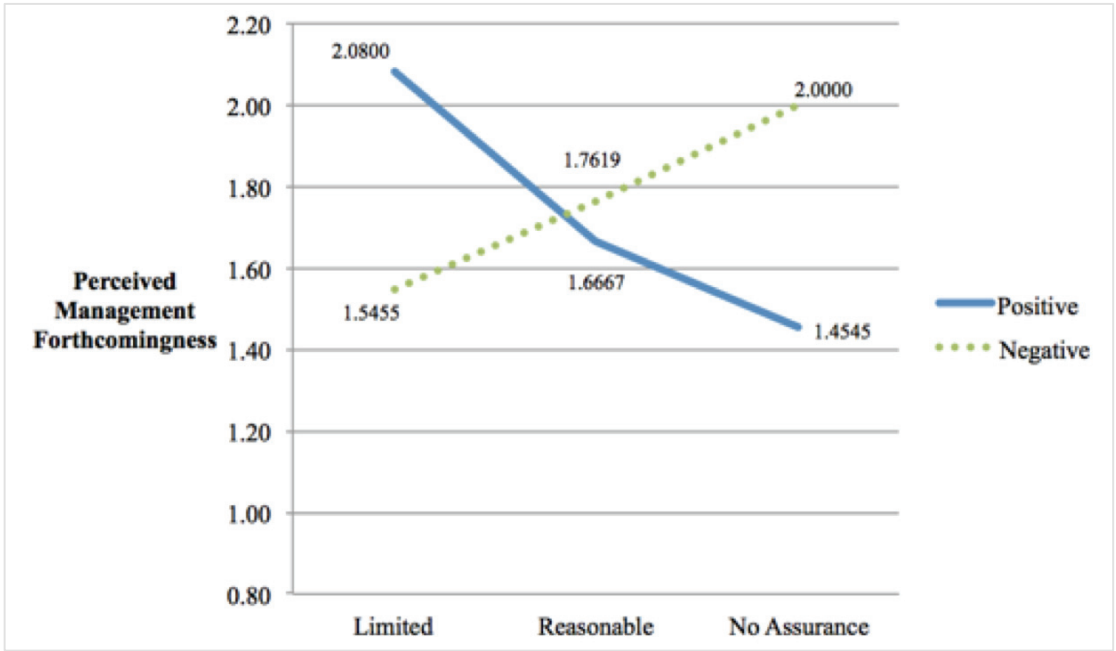
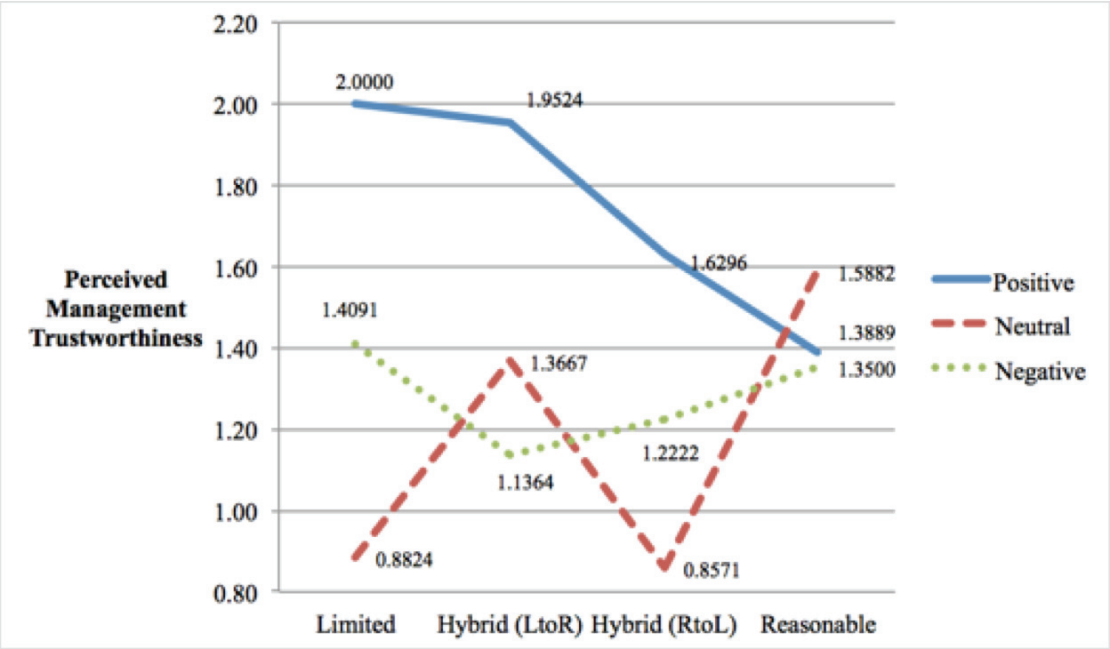


FIGURE 7
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON PERCEIVED MANAGEMENT TRUSTWORTHINESS

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

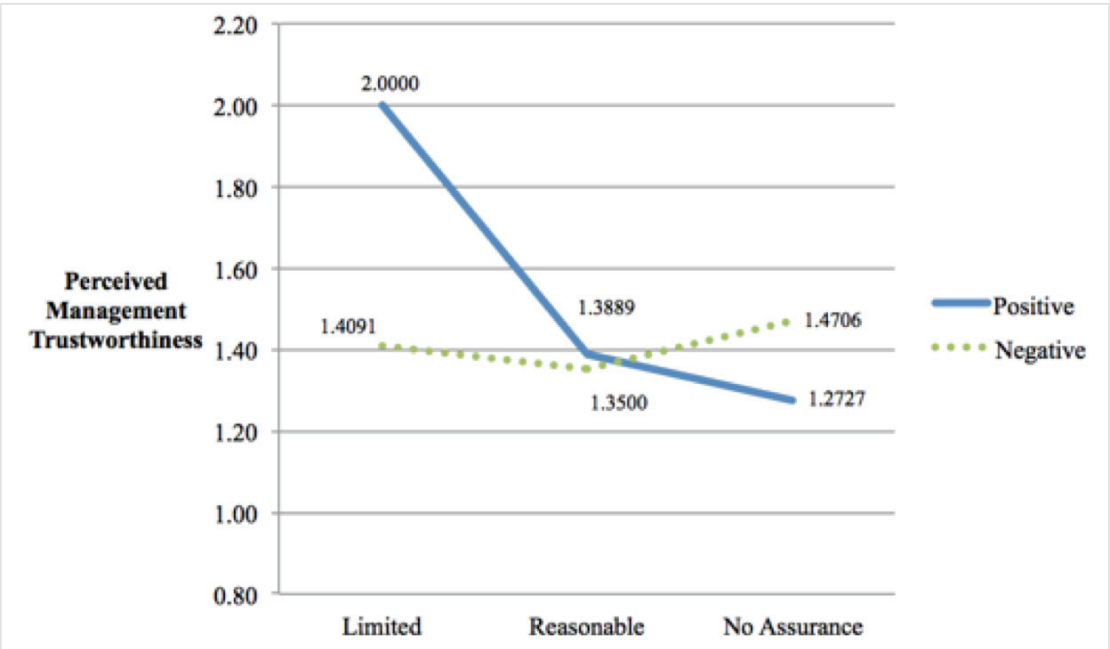
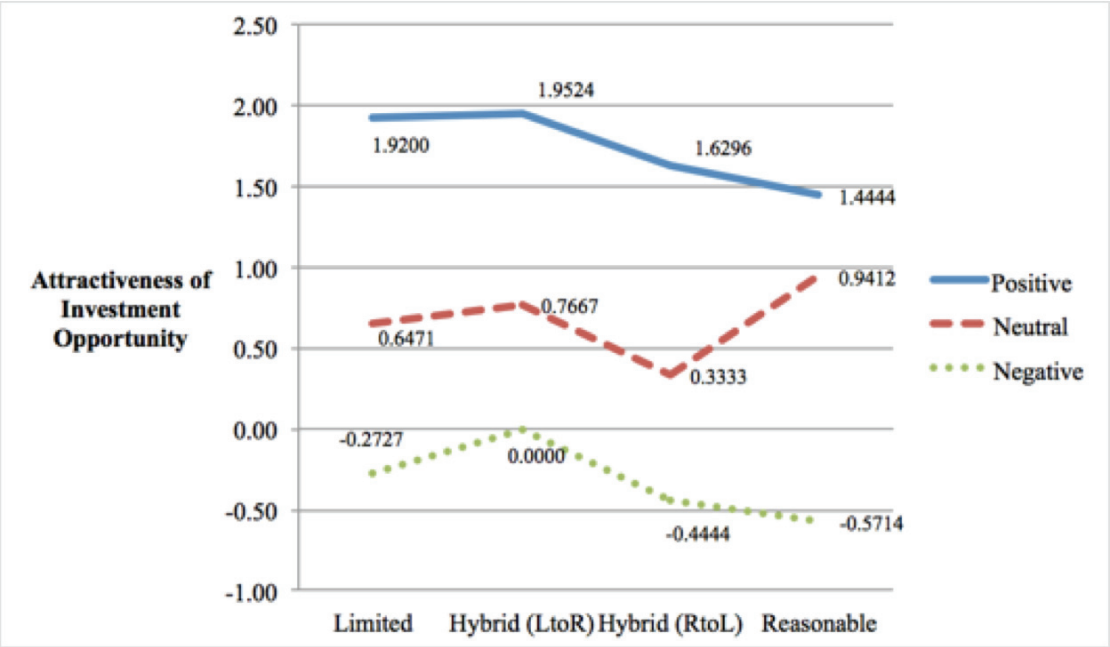


FIGURE 8
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON ATTRACTIVENESS OF INVESTMENT OPPORTUNITY

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

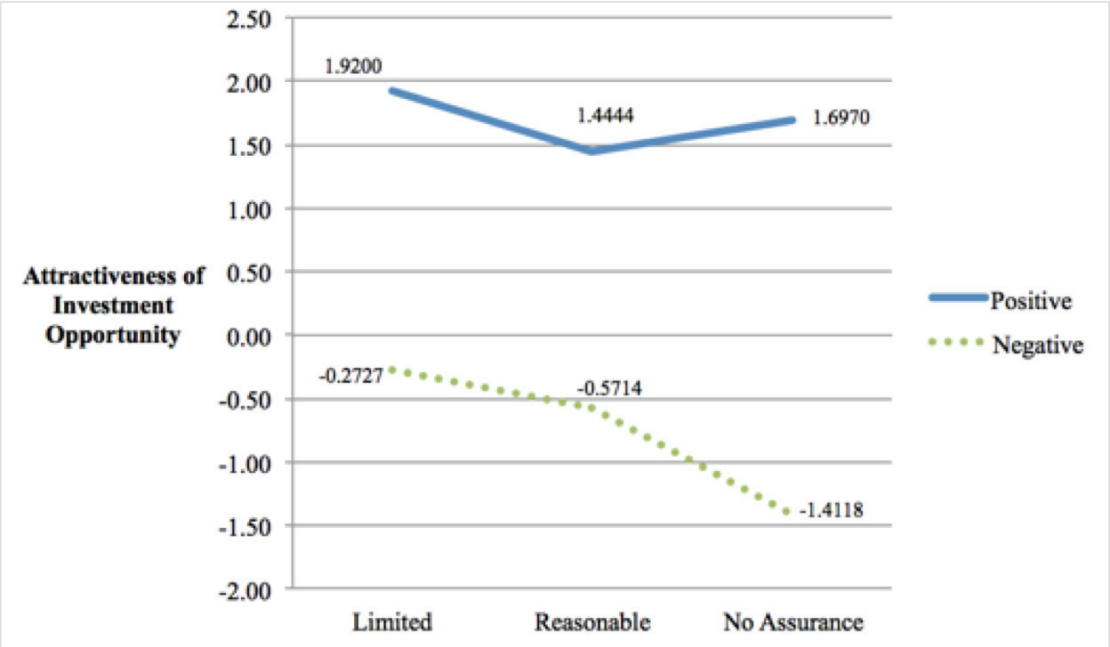
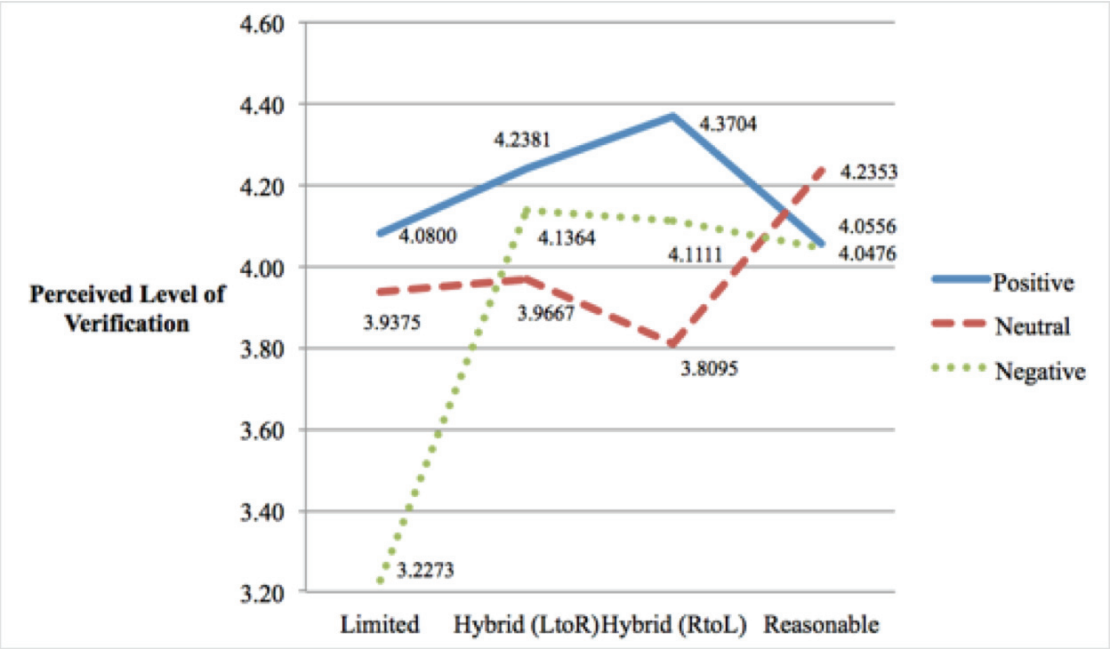


FIGURE 9
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON PERCEIVED LEVEL OF VERIFICATION

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

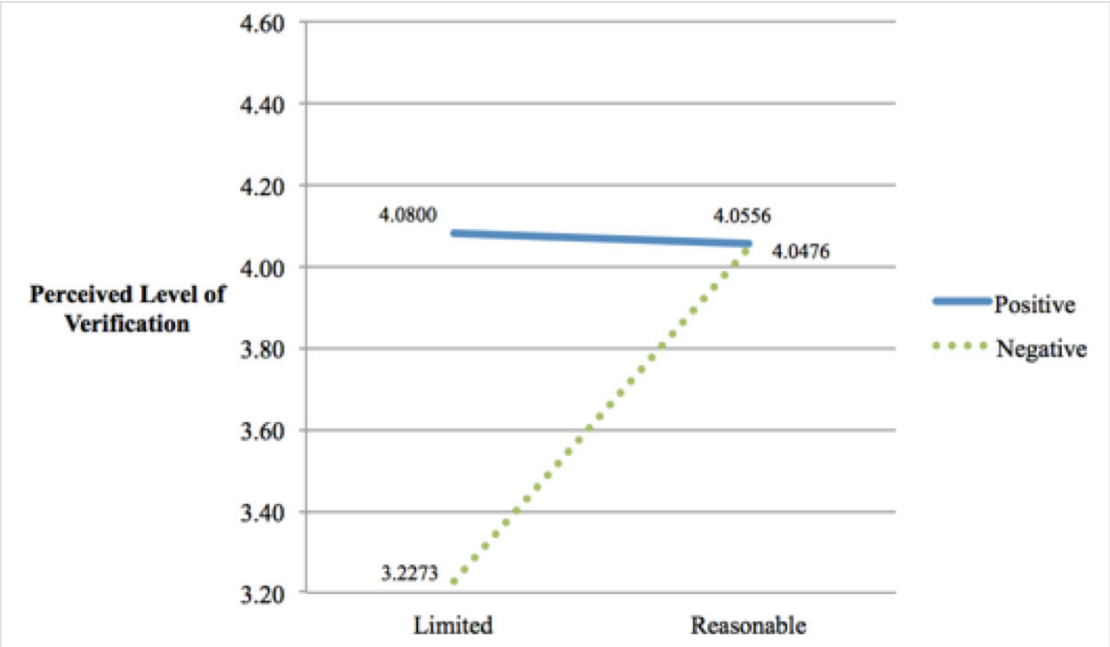
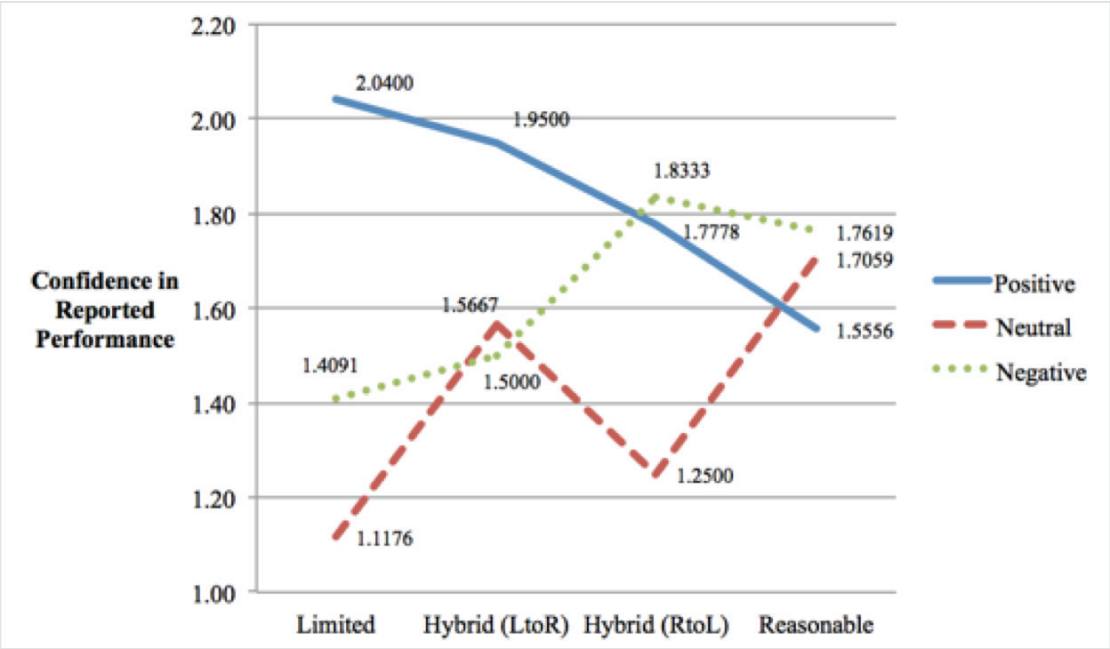


FIGURE 10
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON CONFIDENCE IN REPORTED PERFORMANCE

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

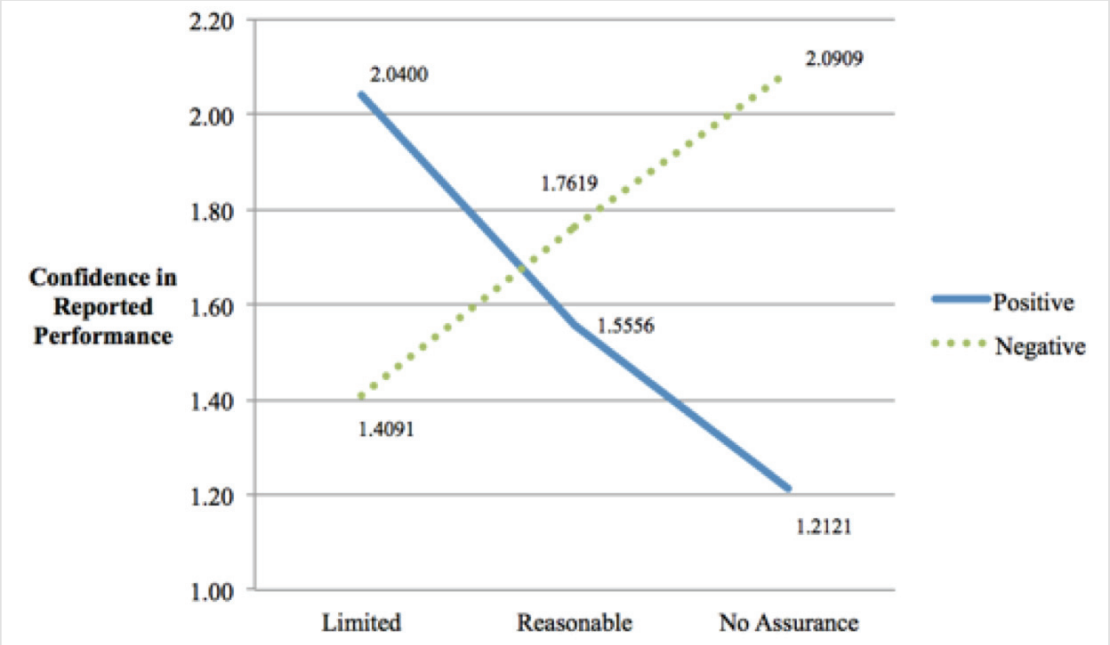
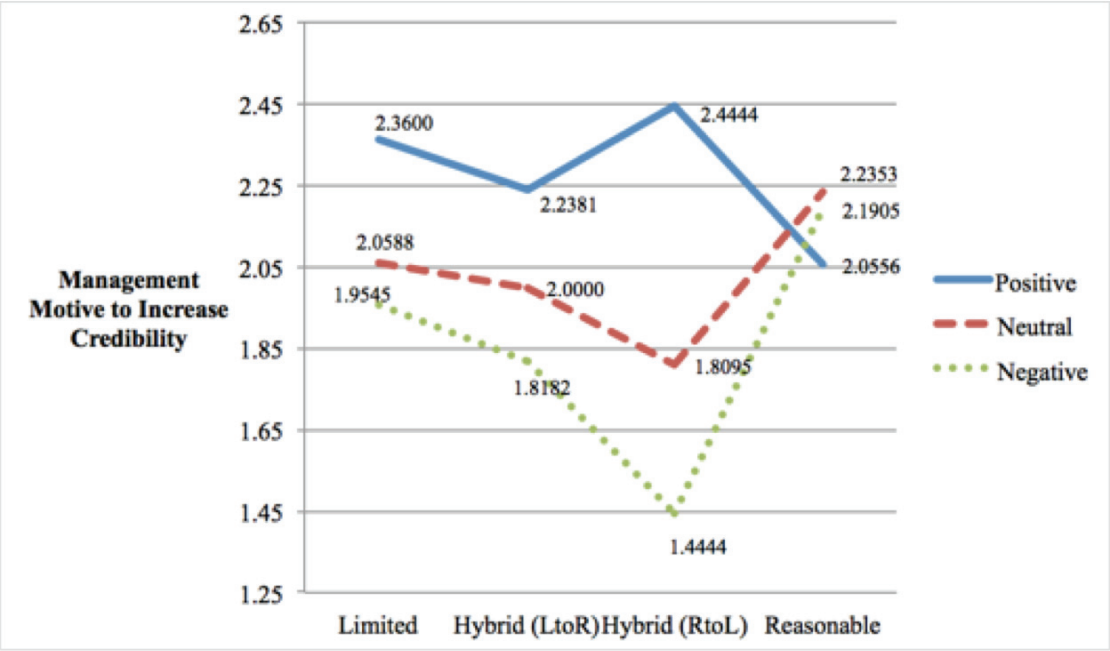


FIGURE 11
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON MANAGEMENT MOTIVE TO INCREASE CREDIBILITY

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

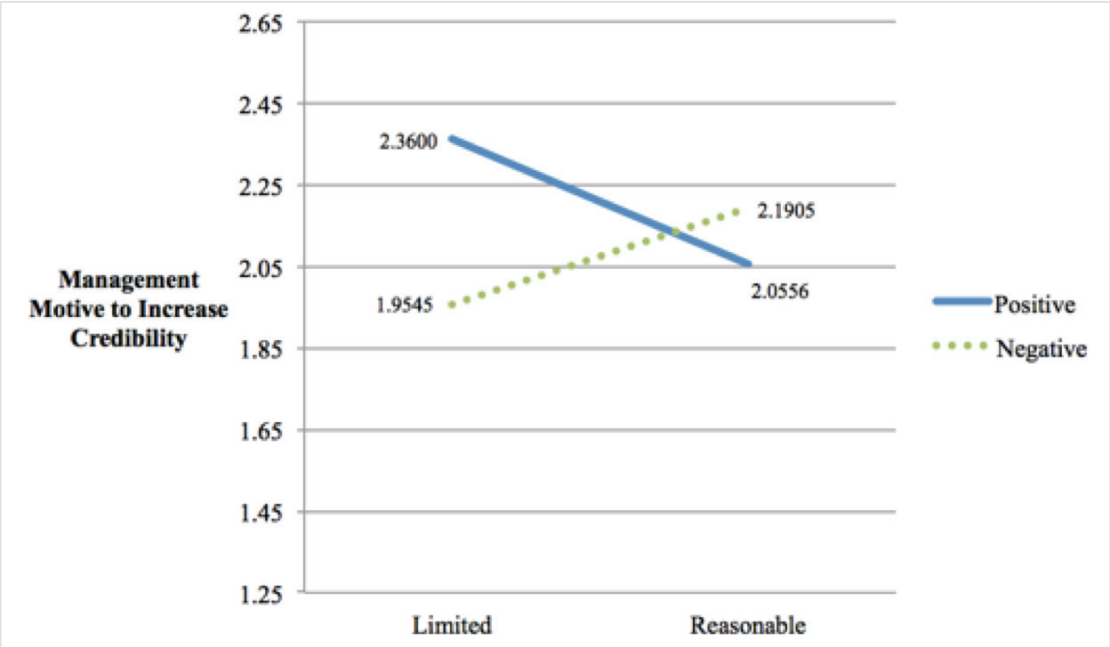
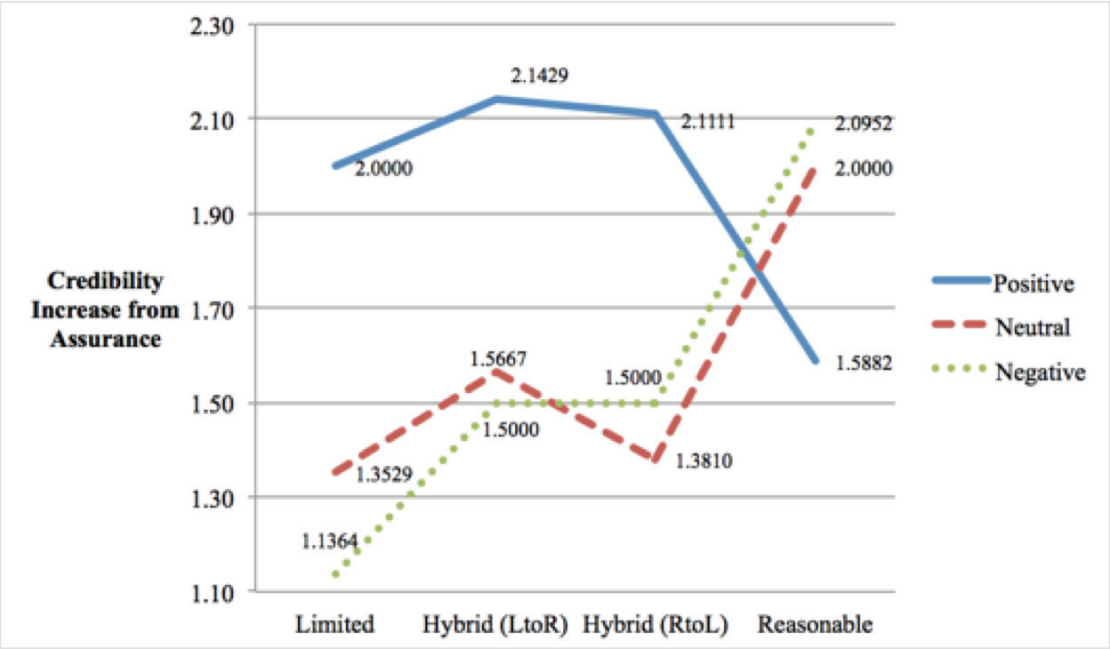


FIGURE 12
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON CREDIBILITY INCREASE FROM ASSURANCE

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

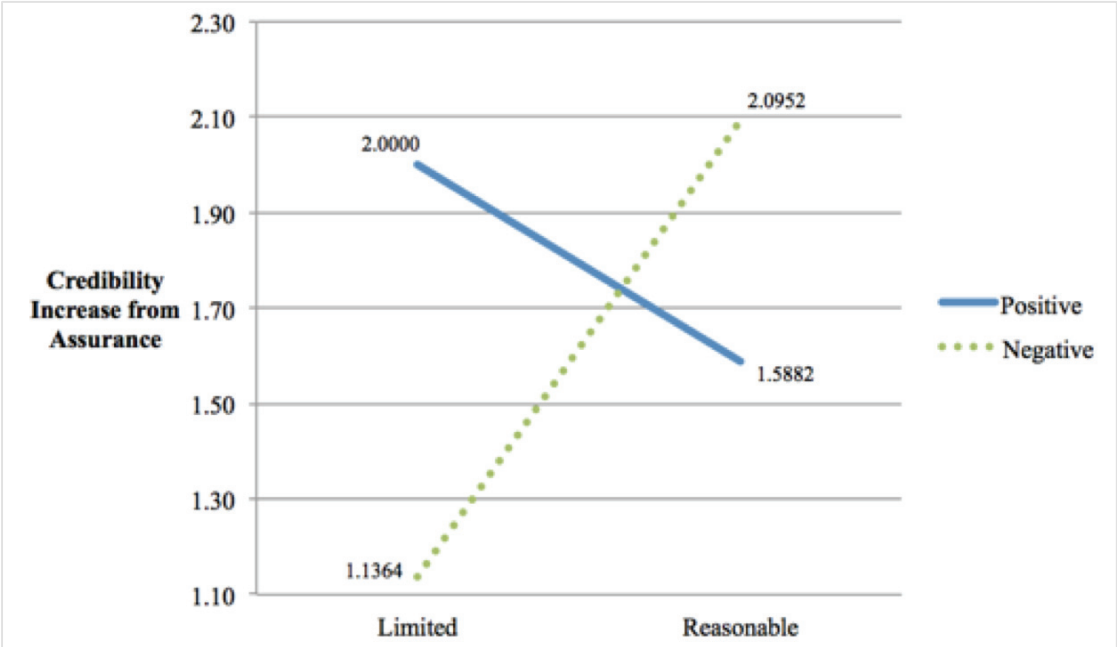
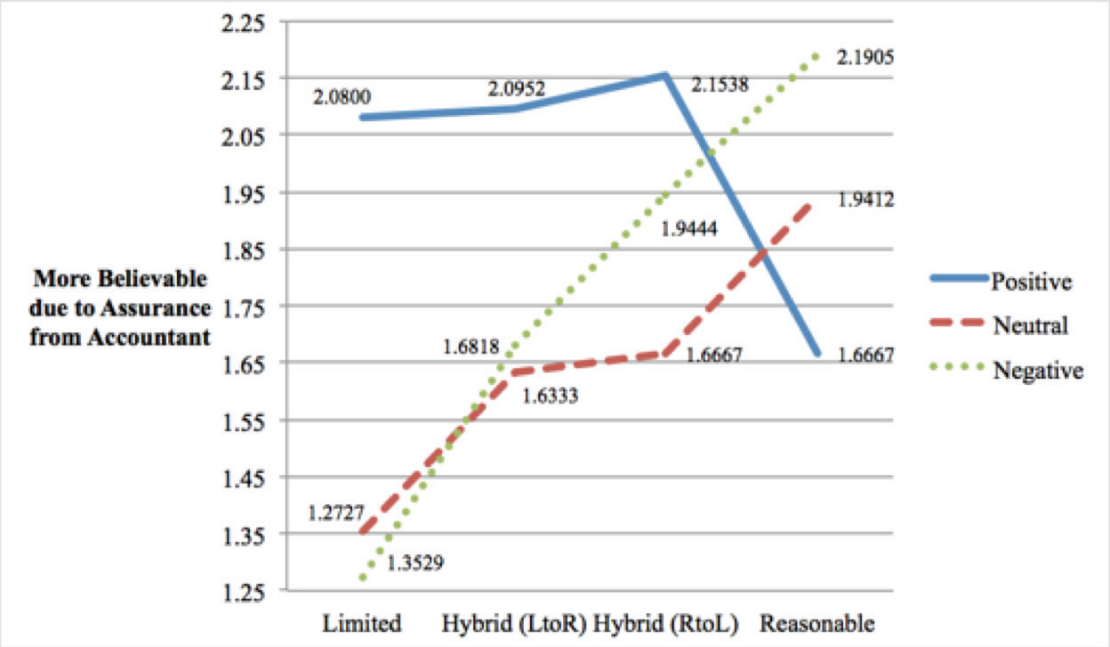


FIGURE 13
EFFECTS OF FIRM CSR PERFORMANCE AND ASSURANCE PROVIDED ON MORE BELIEVABLE DUE TO ASSURANCE FROM ACCOUNTANT

***Panel A**: Original Analysis*



***Panel B**: Supplemental Analysis*

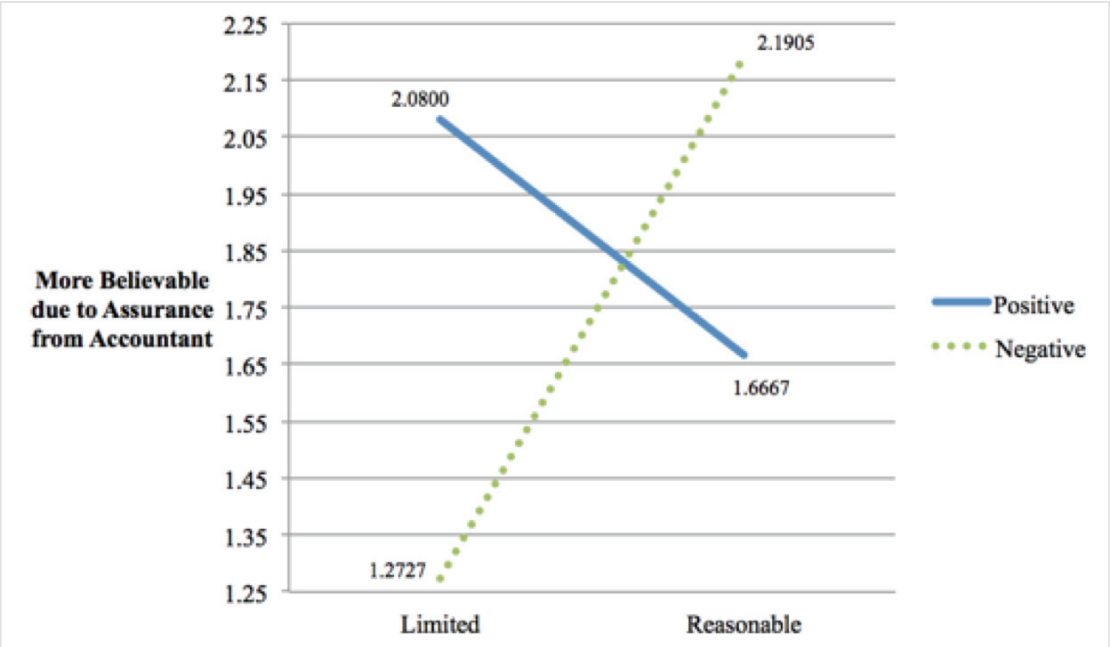


FIGURE 14
EFFECTS OF ASSURANCE STATEMENTS WITH PERCEIVED RELIABILITY AS THE DEPENDENT VARIABLE

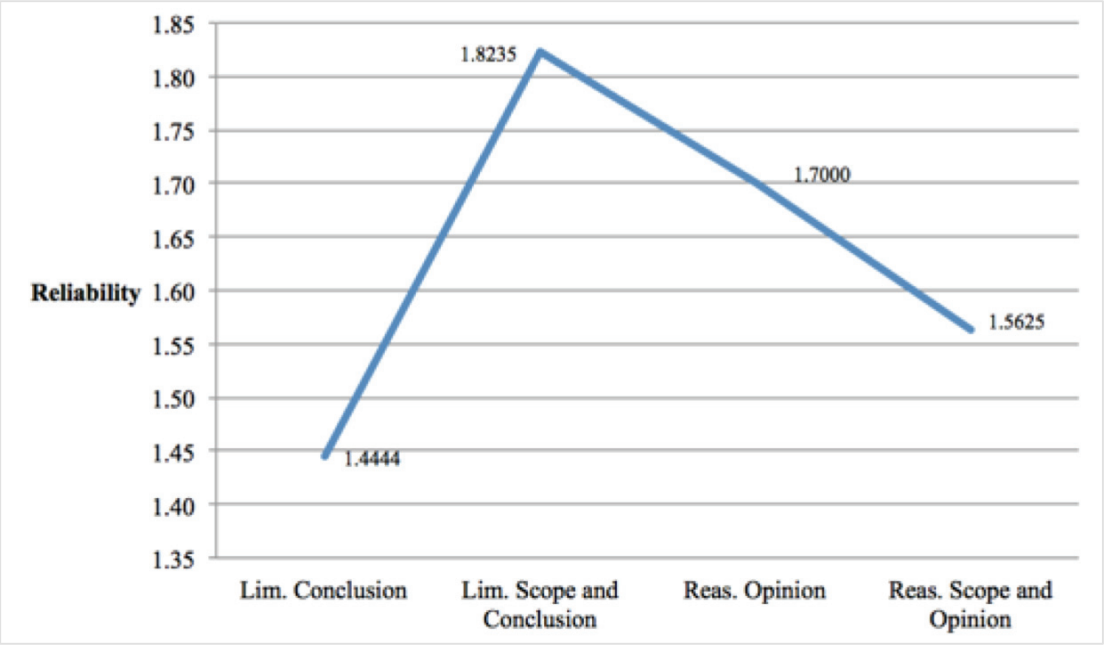


FIGURE 15
EFFECTS OF ASSURANCE STATEMENTS WITH EXTENT OF VERIFICATION AS THE DEPENDENT VARIABLE

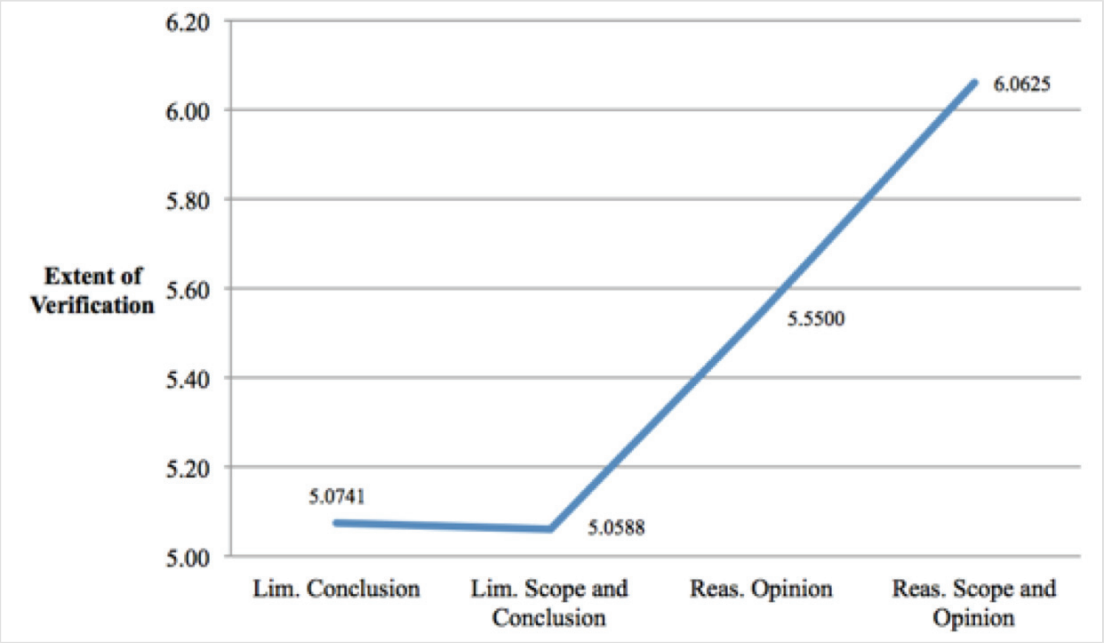


TABLE 1
ASSURANCES UNDER ISAE 3000 AND U.S. GENERAL ATTESTATION STANDARDS

ISAE 3000

As effective for assurance reports dated on or after December 15, 2015

	Reasonable Assurance Engagement	**Limited Assurance Engagement**
Definition	"An assurance engagement in which the practitioner reduces engagement risk to an acceptably low level in the circumstances of the engagement as the basis for the practitioner's conclusion. The practitioner's conclusion is expressed in a form that conveys the practitioner's opinion on the outcome of the measurement or evaluation of the underlying subject matter against criteria" (IAASB 2013a, par. 12(a)(i)(a)).	"An assurance engagement in which the practitioner reduces engagement risk to a level that is acceptable in the circumstances of the engagement but where that risk is greater than for a reasonable assurance engagement as the basis for expressing a conclusion in a form that conveys whether, based on the procedures performed and evidence obtained, a matter(s) has come to the practitioner's attention to cause the practitioner to believe the subject matter information is materially misstated. The nature, timing, and extent of procedures performed in a limited assurance engagement is limited compared with that necessary in a reasonable assurance engagement but is planned to obtain a level of assurance that is, in the practitioner's professional judgment, meaningful. To be meaningful, the level of assurance obtained by the practitioner is likely to enhance the intended users' confidence about the subject matter information to a degree that is clearly more than inconsequential" (IAASB 2013a, par. 12(a)(i)(a)).
Example result when expressed in terms of the underlying subject matter and the applicable criteria	"In our opinion, the entity has complied, in all material respects, with XYZ law" (IAASB 2013a, par. A178).	"Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that [the entity] has not complied, in all material respects, with XYZ law" (IAASB 2013a, par. A180).

U.S. General Attestation Standards (Clarified and Recodified)

As effective for attestation reports dated on or after May 1, 2017

	Examination Engagement (Reasonable Assurance)	**Review Engagement (Limited Assurance)**
Definition	"An attestation engagement in which the practitioner obtains reasonable assurance by obtaining sufficient appropriate evidence about the measurement or evaluation of subject matter against criteria in order to be able to draw reasonable conclusions on which to base the practitioner's opinion about whether the subject matter is in accordance with the criteria or the assertion is fairly stated, in all material respects" (AICPA 2015a, par. 10(b)(i)).	"An attestation engagement in which the practitioner obtains limited assurance by obtaining sufficient appropriate review evidence about the measurement or evaluation of subject matter against criteria in order to express a conclusion about whether any material modification should be made to the subject matter in order for it be in accordance with the criteria, or to the assertion in order for it to be fairly stated, in all material respects" (AICPA 2015a, par. 10(b)(ii)).
Example result on subject matter for which suitable criteria exist in Independent Accountant's Report	"In our opinion, [identify the subject matter, for example, the schedule of investment returns of XYZ Company for the year ended December 31, 20XX], is in accordance with [or based on] [identify the criteria, for example, the ABC criteria set forth in Note 1], in all material respects" (AICPA 2015b, par. A112, Example 1).	"Based on our review, we are not aware of any material modifications that should be made to [identify the subject matter, for example, the schedule of investment returns of XYZ Company for the year ended December 31, 20XX], in order for it be in accordance with [or based on][identify the criteria, for example, the ABC criteria set forth in Note 1]" (AICPA 2015c, par. A87, Example 1).

TABLE 2
RECONCILIATION OF TOTAL SAMPLE TO ACCEPTED SAMPLE

Total Sample:	**734**
Failed manipulation check:	(246)
Passed manipulation but failed comprehension check on number of verification methods used:	(102)
Of those remaining, spent less than 1 minute on the experiment:	(8)
Of those remaining, Worker ID does not appear in MTurk output:	(4)
Of those remaining, failed comprehension check on who prepared the independent accountant's report:	(34)
Of those remaining, failed comprehension check on greenhouse gas emissions or financial statements:	(6)
Of those remaining, did not correctly identify firm performance compared to industry average:	(72)
Of those remaining, failed to respond to dependent variable questions:	(3)
Usable Sample:	**259**

TABLE 3
PARTICIPANT DEMOGRAPHIC INFORMATION

***Panel A**: Original Experiment*

	Accepted Sample (n = 259)		Rejected Sample (n = 475)		Accept vs. Reject Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: What is your gender?						
Male	142	55.04%	267	56.45%	-0.3668	0.71138
Female	116	44.96%	206	43.55%	0.3668	0.71138
	258	100.00%	473	100.00%		
Q: How old are you?						
Under 18	0	0.00%	0	0.00%	N/A	N/A
18-25	47	18.15%	115	24.21%	-1.8929	**0.05876**
26-34	116	44.79%	205	43.16%	0.4253	0.66720
35-54	77	29.73%	124	26.11%	1.0523	0.29372
55-64	16	6.18%	26	5.47%	0.3924	0.69654
65 or over	3	1.16%	5	1.05%	0.1318	0.89656
	259	100.00%	475	100.00%		
Q: What is the highest level of education you have completed?						
Less than High School (0-8 years)	0	0.00%	0	0.00%	N/A	N/A
Some High School (9-12 years, but did not graduate)	1	0.39%	4	0.84%	-0.7177	0.47152
GED or High School Equivalency	9	3.47%	21	4.42%	-0.6187	0.53526
High School Graduate	18	6.95%	27	5.68%	0.6830	0.49650
Attended a Vocational or Trade School after High School	12	4.63%	16	3.37%	0.8548	0.39532
Some College (no degree)	47	18.15%	96	20.21%	-0.6746	0.50286
2-year College Degree (Associate's Degree)	19	7.34%	53	11.16%	-1.6636	**0.09692**
4-year College Degree (BS, BA, or similar)	101	39.00%	176	37.05%	0.5191	0.60306
Some postgraduate (no degree)	12	4.63%	23	4.84%	-0.1269	0.89656
Postgraduate (MS, MA, PhD, MD, etc.)	40	15.44%	59	12.42%	1.1457	0.25014
	259	100.00%	475	100.00%		

	Accepted Sample (n = 259)		Rejected Sample (n = 475)		Accept vs. Reject Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: Approximately how many of the following courses have you completed?						
Accounting						
None	89	40.83%	158	39.11%	0.4175	0.67448
1 to 3	110	50.46%	203	50.25%	0.0503	0.96012
4 to 10	14	6.42%	32	7.92%	-0.6815	0.49650
10+	5	2.29%	11	2.72%	-0.3226	0.74896
	218	100.00%	404	100.00%		
Auditing						
None	178	82.03%	318	79.30%	0.8126	0.41794
1 to 3	36	16.59%	73	18.20%	-0.5027	0.61708
4 to 10	3	1.38%	8	2.00%	-0.5497	0.58232
10+	0	0.00%	2	0.50%	-1.0420	0.29834
	217	100.00%	401	100.00%		
Finance						
None	100	45.87%	161	40.15%	1.3770	0.16758
1 to 3	105	48.17%	197	49.13%	-0.2287	0.81810
4 to 10	12	5.50%	38	9.48%	-1.7321	**0.08364**
10+	1	0.46%	5	1.25%	-0.9560	0.33706
	218	100.00%	401	100.00%		
Statistics						
None	55	25.58%	96	23.88%	0.4682	0.63836
1 to 3	146	67.91%	265	65.92%	0.4986	0.61708
4 to 10	14	6.51%	36	8.96%	-1.0598	0.28914
10+	0	0.00%	5	1.24%	-1.6419	0.10100
	215	100.00%	402	100.00%		
Other Specialized Mathematics (for example, calculus)						
None	53	24.31%	99	24.44%	-0.0367	0.96810
1 to 3	123	56.42%	209	51.60%	1.1494	0.25014
4 to 10	35	16.06%	76	18.77%	-0.8432	0.40090
10+	7	3.21%	21	5.19%	-1.1344	0.25848
	218	100.00%	405	100.00%		

	Accepted Sample (n = 259)		Rejected Sample (n = 475)		Accept vs. Reject Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: How old were you when you first learned to speak English?						
Less than 5 years old	252	97.67%	445	93.88%	2.2974	**0.02144**
5-10 years old	2	0.78%	16	3.38%	-11.3158	**< 0.00001**
11-15 years old	2	0.78%	2	0.42%	5.2808	**< 0.00001**
16-20 years old	0	0.00%	2	0.42%	-0.2604	0.79486
21 years or older	2	0.78%	9	1.90%	2.8154	**0.00480**
	258	100.00%	474	100.00%		
Q: What were you doing last week? (Please choose all that apply):						
Working a full-time job for pay or profit, that is, 35 hours or more?	164	46.72%	326	51.66%	-1.4839	0.13888
Working for pay or profit part-time, that is, 1-34 hours?	49	13.96%	89	14.10%	-0.0624	0.95216
Working two or more part-time jobs for pay, totaling 35 hours or more?	2	0.57%	8	1.27%	-1.0442	0.29834
Unemployed, laid off, or looking for work?	22	6.27%	20	3.17%	2.2996	**0.02144**
With a job but not at work because of temporary illness, vacation, or work stoppage?	8	2.28%	13	2.06%	0.2273	0.81810
With a job but on family leave (maternity or paternity leave)?	1	0.28%	2	0.32%	-0.0872	0.92828
In school?	18	5.13%	42	6.66%	-0.9580	0.33706
Keeping house?	50	14.25%	84	13.31%	0.4081	0.68180
Doing volunteer work?	21	5.98%	30	4.75%	0.8315	0.40654
Other (please specify)	16	4.56%	17	2.69%	1.5536	0.12114
	351	100.00%	631	100.00%		

	Accepted Sample (n = 259)		Rejected Sample (n = 475)		Accept vs. Reject Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: For what kind of business or industry do you or did you work?						
Construction and Extraction	3	1.08%	20	3.84%	-2.2221	**0.02642**
Farming, Fishing, and Forestry	3	1.08%	7	1.34%	-0.3203	0.74896
Installation, Maintenance, and Repair	9	3.24%	17	3.26%	-0.0194	0.98404
Office and Administrative Support	46	16.55%	76	14.59%	0.7334	0.46540
Management, Business, and Financial	27	9.71%	75	14.40%	-1.8895	**0.05876**
Production	16	5.76%	23	4.41%	0.8378	0.40090
Professional and Related	50	17.99%	89	17.08%	0.3207	0.74896
Sales and Related	34	12.23%	75	14.40%	-0.8493	0.39532
Service	34	12.23%	58	11.13%	0.4630	0.64552
Transportation and Material Moving	6	2.16%	10	1.92%	0.2296	0.81810
Other (please specify)	50	17.99%	71	13.63%	1.6368	0.10100
	278	100.00%	521	100.00%		
Q: Are you now, or have you ever been, a Certified Public Accountant (CPA)?						
Yes	2	0.77%	11	2.32%	-1.5151	0.12852
No	257	99.23%	464	97.68%	1.5151	0.12852
	259	100.00%	475	100.00%		

***Panel B**: Supplemental Experiment – No Assurance*

	Accepted Sample, Original Study (n = 259)		Accepted Sample, No Assurance (n = 94)		Accepted Original vs. No Assurance Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: What is your gender?						
Male	142	55.04%	55	58.51%	0.5805	0.56192
Female	116	44.96%	39	41.49%	-0.5805	0.56192
	258	100.00%	94	100.00%		
Q: How old are you?						
Under 18	0	0.00%	0	0.00%	N/A	N/A
18-25	47	18.15%	15	15.96%	-0.4778	0.63122
26-34	116	44.79%	33	35.11%	-1.6279	0.10310
35-54	77	29.73%	39	41.49%	2.0792	**0.03752**
55-64	16	6.18%	5	5.32%	-0.3014	0.76418
65 or over	3	1.16%	2	2.13%	0.6813	0.49650
	259	100.00%	94	100.00%		
Q: What is the highest level of education you have completed?						
Less than High School (0-8 years)	0	0.00%	0	0.00%	N/A	N/A
Some High School (9-12 years, but did not graduate)	1	0.39%	0	0.00%	-0.6033	0.54850
GED or High School Equivalency	9	3.47%	5	5.32%	0.7848	0.43540
High School Graduate	18	6.95%	3	3.19%	-1.3195	0.18684
Attended a Vocational or Trade School after High School	12	4.63%	2	2.13%	-1.0662	0.28462
Some College (no degree)	47	18.15%	22	23.40%	1.1010	0.27134
2-year College Degree (Associate's Degree)	19	7.34%	15	15.96%	2.4269	**0.01510**
4-year College Degree (BS, BA, or similar)	101	39.00%	41	43.62%	0.7826	0.43540
Some postgraduate (no degree)	12	4.63%	1	1.06%	-1.5739	0.11642
Postgraduate (MS, MA, PhD, MD, etc.)	40	15.44%	5	5.32%	-2.5212	**0.01174**
	259	100.00%	94	100.00%		

	Accepted Sample, Original Study (n = 259)		Accepted Sample, No Assurance (n = 94)		Accepted Original vs. No Assurance Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: Approximately how many of the following courses have you completed?						
Accounting						
None	89	40.83%	32	38.10%	-0.4339	0.66720
1 to 3	110	50.46%	44	52.38%	0.2994	0.76418
4 to 10	14	6.42%	7	8.33%	0.5851	0.55520
10+	5	2.29%	1	1.19%	-0.6156	0.53526
	218	100.00%	84	100.00%		
Auditing						
None	178	82.03%	68	80.95%	-0.2165	0.82588
1 to 3	36	16.59%	15	17.86%	0.2629	0.79486
4 to 10	3	1.38%	1	1.19%	-0.1305	0.89656
10+	0	0.00%	0	0.00%	N/A	N/A
	217	100.00%	84	100.00%		
Finance						
None	100	45.87%	37	44.05%	-0.2853	0.77182
1 to 3	105	48.17%	38	45.24%	-0.4565	0.64552
4 to 10	12	5.50%	7	8.33%	0.9072	0.36282
10+	1	0.46%	2	2.38%	1.5093	0.13104
	218	100.00%	84	100.00%		
Statistics						
None	55	25.58%	28	33.33%	1.3454	0.17702
1 to 3	146	67.91%	53	63.10%	-0.7926	0.42952
4 to 10	14	6.51%	3	3.57%	-0.9868	0.32218
10+	0	0.00%	0	0.00%	N/A	N/A
	215	100.00%	84	100.00%		
Other Specialized Mathematics (for example, calculus)						
None	53	24.31%	27	32.14%	1.3819	0.16758
1 to 3	123	56.42%	45	53.57%	-0.4468	0.65272
4 to 10	35	16.06%	11	13.10%	-0.6414	0.52218
10+	7	3.21%	1	1.19%	-0.9798	0.32708
	218	100.00%	84	100.00%		

	Accepted Sample, Original Study (n = 259)		Accepted Sample, No Assurance (n = 94)		Accepted Original vs. No Assurance Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: How old were you when you first learned to speak English?						
Less than 5 years old	252	97.67%	90	95.74%	-0.9641	0.33706
5-10 years old	2	0.78%	2	2.13%	1.0591	0.28914
11-15 years old	2	0.78%	0	0.00%	-0.8561	0.38978
16-20 years old	0	0.00%	0	0.00%	N/A	N/A
21 years or older	2	0.78%	2	2.13%	1.0591	0.28914
	258	100.00%	94	100.00%		
Q: What were you doing last week? (Please choose all that apply):						
Working a full-time job for pay or profit, that is, 35 hours or more?	164	46.72%	66	55.93%	1.7311	0.08364
Working for pay or profit part-time, that is, 1-34 hours?	49	13.96%	18	15.25%	0.3475	0.72634
Working two or more part-time jobs for pay, totaling 35 hours or more?	2	0.57%	1	0.85%	0.3273	0.74140
Unemployed, laid off, or looking for work?	22	6.27%	7	5.93%	-0.1309	0.89656
With a job but not at work because of temporary illness, vacation, or work stoppage?	8	2.28%	0	0.00%	-1.6541	0.09894
With a job but on family leave (maternity or paternity leave)?	1	0.28%	0	0.00%	-0.5804	0.56192
In school?	18	5.13%	4	3.39%	-0.7726	0.44130
Keeping house?	50	14.25%	15	12.71%	-0.4170	0.67448
Doing volunteer work?	21	5.98%	7	5.93%	-0.0201	0.98404
Other (please specify)	16	4.56%	0	0.00%	-2.3599	**0.01828**
	351	100.00%	118	100.00%		

	Accepted Sample, Original Study (n = 259)		Accepted Sample, No Assurance (n = 94)		Accepted Original vs. No Assurance Comparison	
	Count	% of Total	Count	% of Total	t-stat (z-score)	p-value (two-tailed)
Q: For what kind of business or industry do you or did you work?						
Construction and Extraction	3	1.08%	7	7.14%	3.2080	**0.00132**
Farming, Fishing, and Forestry	3	1.08%	0	0.00%	-1.0325	0.30302
Installation, Maintenance, and Repair	9	3.24%	4	4.08%	0.3933	0.69654
Office and Administrative Support	46	16.55%	19	19.39%	0.6395	0.52218
Management, Business, and Financial	27	9.71%	11	11.22%	0.4271	0.66720
Production	16	5.76%	5	5.10%	-0.2422	0.81034
Professional and Related	50	17.99%	13	13.27%	-1.0759	0.28014
Sales and Related	34	12.23%	9	9.18%	-0.8149	0.41794
Service	34	12.23%	11	11.22%	-0.2637	0.79486
Transportation and Material Moving	6	2.16%	2	2.04%	-0.0693	0.94420
Other (please specify)	50	17.99%	17	17.35%	-0.1421	0.88866
	278	100.00%	98	100.00%		
Q: Are you now, or have you ever been, a Certified Public Accountant (CPA)?						
Yes	2	0.77%	1	1.06%	0.2638	0.79486
No	257	99.23%	93	98.94%	-0.2638	0.79486
	259	100.00%	94	100.00%		

TABLE 4
SUMMARY OF EXPERIMENTAL RESEARCH DESIGN

Firm CSR Performance	*Assurance Provided*			
	Limited	**Hybrid LtoR**	**Hybrid RtoL**	**Reasonable**
Positive	Cell A	Cell B	Cell C	Cell D
Neutral	Cell E	Cell F	Cell G	Cell H
Negative	Cell I	Cell J	Cell K	Cell L

TABLE 5
CELL MEANS AND PARAMETRIC TESTS WITH PERCEIVED DISCLOSURE CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				
	Limited	**Hybrid (LtoR)**	**Hybrid (RtoL)**	**Reasonable**	**Totals**
Positive	2.0800 (0.49329) n = 25	1.8095 (0.8729) n = 21	1.7778 (1.1547) n = 27	1.8333 (0.9852) n = 18	1.8791 (0.9047) n = 91
Neutral	1.3529 (1.3666) n = 17	1.7667 (1.0063) n = 30	1.4286 (0.9783) n = 21	1.8824 (0.8575) n = 17	1.6235 (1.0576) n = 85
Negative	1.6364 (1.5900) n = 22	1.6364 (1.3988) n = 22	1.7778 (1.3528) n = 18	2.0000 (0.9487) n = 21	1.7590 (1.3306) n = 83
Totals	1.7344 (1.2246) n = 64	1.7397 (1.0933) n = 73	1.6667 (1.1547) n = 66	1.9107 (0.9200) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.690	0.557	0.644
Performance	2	1.517	1.226	0.295
Assurance * Performance	6	0.841	0.679	0.666

***Panel C**: Planned Contrasts*

Hypothesis	Comparisons:	F-Value	p-value (two-tailed)
H1a	Negative Performance, Limited vs. Hybrid LtoR	< 0.001	1.000
H1a	Negative Performance, Limited vs. Hybrid RtoL	0.160	0.690
H1a	Negative Performance, Limited vs. Reasonable	1.148	0.285
H1a	Negative Performance, Hybrid LtoR vs. Hybrid RtoL	0.160	0.690
H1a	Negative Performance, Hybrid LtoR vs. Reasonable	1.148	0.285
H1a	Negative Performance, Hybrid RtoL vs. Reasonable	0.387	0.535
H1b	Limited Assurance, Positive vs. Negative	1.861	0.174
H1b	Hybrid LtoR Assurance, Positive vs. Negative	0.260	0.610
H1b	Hybrid RtoL Assurance, Positive vs. Negative	< 0.001	1.000
H1b	Reasonable Assurance, Positive vs. Negative	0.218	0.641
H2	Positive Performance, Limited vs. Reasonable	0.514	0.474
H3	Positive Performance, Hybrid LtoR vs. Limited	0.675	0.412
H3	Positive Performance, Hybrid RtoL vs. Limited	0.958	0.329
H3	Positive Performance, Hybrid LtoR vs. Reasonable	0.004	0.947
H3	Positive Performance, Hybrid RtoL vs. Reasonable	0.027	0.870

***Panel D**: Environmental Attitudes ANCOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.624	0.502	0.681
Performance	2	1.481	1.193	0.305
Assurance * Performance	6	0.873	0.703	0.647
Covariate: Composite Environmental Score	1	0.217	0.175	0.676

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.656	0.528	0.664
Performance	2	1.495	1.203	0.302
Assurance * Performance	6	0.857	0.69	0.658
Covariate: Reality of Limits to Growth	1	0.096	0.077	0.782

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.667	0.537	0.658
Performance	2	1.508	1.214	0.299
Assurance * Performance	6	0.847	0.682	0.665
Covariate: Antianthropocentrism	1	0.046	0.037	0.848

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.575	0.464	0.707
Performance	2	1.363	1.1	0.335
Assurance * Performance	6	0.892	0.72	0.634
Covariate: Fragility of Nature's Balance	1	0.914	0.738	0.391

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.794	0.642	0.589
Performance	2	1.476	1.193	0.305
Assurance * Performance	6	0.805	0.651	0.689
Covariate: Rejection of Exemptionalism	1	1.338	1.081	0.299

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.555	0.448	0.719
Performance	2	1.45	1.172	0.311
Assurance * Performance	6	0.942	0.761	0.601
Covariate: Possibility of an Ecocrisis	1	1.321	1.067	0.303

TABLE 6
NONPARAMETRIC TESTS WITH PERCEIVED DISCLOSURE CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Hybrid LtoR) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	22	23.02	506.44	0.284	0.776
Hybrid (LtoR) Assurance	22	21.98	483.56		

***Panel B**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Hybrid RtoL) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	22	20.66	454.52	0.012	0.919
Hybrid (RtoL) Assurance	18	20.31	365.58		

***Panel C**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	22	21.43	471.46	0.326	0.745
Reasonable Assurance	21	22.60	474.60		

***Panel D**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Hybrid RtoL) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	22	20.14	443.08	0.233	0.816
Hybrid (RtoL) Assurance	18	20.94	376.92		

***Panel E**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	22	20.80	457.60	0.689	0.491
Reasonable Assurance	21	23.26	488.46		

***Panel F**: Mann-Whitney U Test for the Effect of Assurance (Hybrid RtoL vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (RtoL) Assurance	18	19.19	345.42	0.450	0.653
Reasonable Assurance	21	20.69	434.49		

***Panel G**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	24.34	608.50	0.206	0.837
Negative Performance	22	23.61	519.42		

***Panel H**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Hybrid (LtoR) Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	21	21.71	455.91	- 0.153	0.878
Negative Performance	22	22.27	489.94		

***Panel I**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Hybrid (RtoL) Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	27	22.76	614.52	- 0.165	0.869
Negative Performance	18	23.36	420.48		

***Panel J**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Reasonable Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	18	19.06	343.08	- 0.542	0.588
Negative Performance	21	20.81	437.01		

***Panel K**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across All Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	86.54	7875.14	- 0.288	0.773
Negative Performance	83	88.55	7349.65		

***Panel L**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	22.68	567.00	- 0.531	0.595
Reasonable Assurance	18	21.06	379.08		

***Panel M**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	64	59.18	3787.52	0.502	0.615
Reasonable Assurance	56	62.01	3472.56		

***Panel N**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Limited) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	21	21.19	444.99	1.209	0.227
Limited Assurance	25	25.44	636.00		

***Panel O**: Mann-Whitney U Test for the Effect of Assurance (Hybrid RtoL vs. Limited) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (RtoL) Assurance	27	25.26	682.02	0.716	0.474
Limited Assurance	25	27.84	696.00		

***Panel P**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	21	19.26	404.46	0.474	0.635
Reasonable Assurance	18	20.86	375.48		

***Panel Q**: Mann-Whitney U Test for the Effect of Assurance (Hybrid RtoL vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (RtoL) Assurance	27	22.81	615.87	0.130	0.897
Reasonable Assurance	18	23.28	419.04		

***Panel R**: Mann-Whitney U Test for the Effect of Assurance (Hybrid (combined) vs. Limited) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (combined) Assur.	48	35.29	1693.92	1.061	0.289
Limited Assurance	25	40.28	1007.00		

***Panel S**: Mann-Whitney U Test for the Effect of Assurance (Hybrid (combined) vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (combined) Assur.	48	33.07	1587.36	0.321	0.748
Reasonable Assurance	18	34.64	623.52		

TABLE 7
SUMMARY OF RESPONSES TO NEW ENVIRONMENTAL PARADIGM QUESTIONS

Question		Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree	Total	Average
1	We are approaching the limit of the number of people the Earth can support.	25 9.69%	42 16.28%	51 19.77%	82 31.78%	58 22.48%	258 100.00%	0.41085
2	Humans have the right to modify the natural environment to suit their needs.	42 16.41%	79 30.86%	34 13.28%	84 32.81%	17 6.64%	256 100.00%	-0.17578
3	When humans interfere with nature it often produces disastrous consequences.	8 3.15%	25 9.84%	25 9.84%	114 44.88%	82 32.28%	254 100.00%	0.93307
4	Human ingenuity will insure that we do not make the Earth unlivable.	24 9.34%	59 22.96%	78 30.35%	65 25.29%	31 12.06%	257 100.00%	0.07782
5	Humans are seriously abusing the environment.	10 3.86%	15 5.79%	20 7.72%	84 32.43%	130 50.19%	259 100.00%	1.19305
6	The Earth has plenty of natural resources if we just learn how to develop them.	26 10.04%	55 21.24%	34 13.13%	81 31.27%	63 24.32%	259 100.00%	0.38610
7	Plants and animals have as much right as humans to exist.	9 3.49%	23 8.91%	8 3.10%	67 25.97%	151 58.53%	258 100.00%	1.27132
8	The balance of nature is strong enough to cope with the impacts of modern industrial nations.	69 26.74%	89 34.50%	37 14.34%	47 18.22%	16 6.20%	258 100.00%	-0.57364
9	Despite our special abilities, humans are still subject to the laws of nature.	1 0.39%	4 1.56%	8 3.11%	75 29.18%	169 65.76%	257 100.00%	1.58366
10	The so-called "ecological crisis" facing humankind has been greatly exaggerated.	108 41.86%	72 27.91%	33 12.79%	27 10.47%	18 6.98%	258 100.00%	-0.87209
11	The Earth is like a spaceship with very limited room and resources.	19 7.34%	45 17.37%	27 10.42%	90 34.75%	78 30.12%	259 100.00%	0.62934
12	Humans were meant to rule over the rest of nature.	88 34.11%	69 26.74%	27 10.47%	45 17.44%	29 11.24%	258 100.00%	-0.55039
13	The balance of nature is very delicate and easily upset.	11 4.26%	33 12.79%	37 14.34%	106 41.09%	71 27.52%	258 100.00%	0.74806
14	Humans will eventually learn enough about how nature works to be able to control it.	54 20.93%	70 27.13%	55 21.32%	66 25.58%	13 5.04%	258 100.00%	-0.33333
15	If things continue on their present course, we will soon experience a major ecological catastrophe.	13 5.02%	35 13.51%	39 15.06%	76 29.34%	96 37.07%	259 100.00%	0.79923

TABLE 8
CELL MEANS AND PARAMETRIC TESTS WITH RELIABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				Totals
	Limited	Hybrid (LtoR)	Hybrid (RtoL)	Reasonable	
Positive	2.1200 (0.5260) n = 25	1.7143 (0.9562) n = 21	2.0370 (0.9398) n = 27	1.5556 (0.9835) n = 18	1.8901 (0.8750) n = 91
Neutral	1.0000 (1.5411) n = 17	1.5667 (1.0063) n = 30	1.2381 (1.0443) n = 21	1.5882 (0.9393) n = 17	1.3765 (1.1337) n = 85
Negative	1.2857 (1.5857) n = 21	1.1364 (1.6123) n = 22	1.6667 (1.4951) n = 18	2.0476 (0.9207) n = 21	1.5244 (1.4506) n = 82
Totals	1.5397 (1.3299) n = 63	1.4795 (1.2146) n = 73	1.6818 (1.1788) n = 66	1.7500 (0.9582) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	1.041	0.782	0.505
Performance	2	5.639	4.237	0.016
Assurance * Performance	6	2.874	2.159	0.048

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Hybrid LtoR	Negative	Neutral	-0.430	0.324	0.556	-1.211	0.350
		Positive	-0.578	0.352	0.306	-1.426	0.271
	Neutral	Negative	0.430	0.324	0.556	-0.350	1.211
		Positive	-0.148	0.328	1.000	-0.939	0.644
	Positive	Negative	0.578	0.352	0.306	-0.271	1.426
		Neutral	0.148	0.328	1.000	-0.644	0.939
Hybrid RtoL	Negative	Neutral	0.429	0.371	0.746	-0.465	1.322
		Positive	-0.370	0.351	0.877	-1.217	0.476
	Neutral	Negative	-0.429	0.371	0.746	-1.322	0.465
		Positive	-0.799	0.336	0.054	-1.608	0.010
	Positive	Negative	0.370	0.351	0.877	-0.476	1.217
		Neutral	0.799	0.336	0.054	-0.010	1.608
Limited	Negative	Neutral	0.286	0.376	1.000	-0.622	1.193
		Positive	-0.834	0.342	0.046	-1.657	-0.011
	Neutral	Negative	-0.286	0.376	1.000	-1.193	0.622
		Positive	-1.120	0.363	0.007	-1.994	-0.246
	Positive	Negative	0.834	0.342	0.046	0.011	1.657
		Neutral	1.120	0.363	0.007	0.246	1.994
Reasonable	Negative	Neutral	0.459	0.376	0.670	-0.448	1.367
		Positive	0.492	0.371	0.556	-0.401	1.385
	Neutral	Negative	-0.459	0.376	0.670	-1.367	0.448
		Positive	0.033	0.390	1.000	-0.908	0.973
	Positive	Negative	-0.492	0.371	0.556	-1.385	0.401
		Neutral	-0.033	0.390	1.000	-0.973	0.908

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Hybrid LtoR	Hybrid RtoL	-0.530	0.367	0.896	-1.506	0.445
		Limited	-0.149	0.352	1.000	-1.086	0.787
		Reasonable	-0.911	0.352	0.061	-1.847	0.025
	Hybrid RtoL	Hybrid LtoR	0.530	0.367	0.896	-0.445	1.506
		Limited	0.381	0.371	1.000	-0.605	1.367
		Reasonable	-0.381	0.371	1.000	-1.367	0.605
	Limited	Hybrid LtoR	0.149	0.352	1.000	-0.787	1.086
		Hybrid RtoL	-0.381	0.371	1.000	-1.367	0.605
		Reasonable	-0.762	0.356	0.200	-1.709	0.185
	Reasonable	Hybrid LtoR	0.911	0.352	0.061	-0.025	1.847
		Hybrid RtoL	0.381	0.371	1.000	-0.605	1.367
		Limited	0.762	0.356	0.200	-0.185	1.709
Neutral	Hybrid LtoR	Hybrid RtoL	0.329	0.328	1.000	-0.545	1.202
		Limited	0.567	0.350	0.642	-0.365	1.498
		Reasonable	-0.022	0.350	1.000	-0.953	0.910
	Hybrid RtoL	Hybrid LtoR	-0.329	0.328	1.000	-1.202	0.545
		Limited	0.238	0.376	1.000	-0.763	1.239
		Reasonable	-0.350	0.376	1.000	-1.351	0.651
	Limited	Hybrid LtoR	-0.567	0.350	0.642	-1.498	0.365
		Hybrid RtoL	-0.238	0.376	1.000	-1.239	0.763
		Reasonable	-0.588	0.396	0.831	-1.641	0.464
	Reasonable	Hybrid LtoR	0.022	0.350	1.000	-0.910	0.953
		Hybrid RtoL	0.350	0.376	1.000	-0.651	1.351
		Limited	0.588	0.396	0.831	-0.464	1.641
Positive	Hybrid LtoR	Hybrid RtoL	-0.323	0.336	1.000	-1.216	0.570
		Limited	-0.406	0.342	1.000	-1.314	0.503
		Reasonable	0.159	0.371	1.000	-0.827	1.144
	Hybrid RtoL	Hybrid LtoR	0.323	0.336	1.000	-0.570	1.216
		Limited	-0.083	0.320	1.000	-0.935	0.769
		Reasonable	0.481	0.351	1.000	-0.452	1.415
	Limited	Hybrid LtoR	0.406	0.342	1.000	-0.503	1.314
		Hybrid RtoL	0.083	0.320	1.000	-0.769	0.935
		Reasonable	0.564	0.357	0.689	-0.384	1.513
	Reasonable	Hybrid LtoR	-0.159	0.371	1.000	-1.144	0.827
		Hybrid RtoL	-0.481	0.351	1.000	-1.415	0.452
		Limited	-0.564	0.357	0.689	-1.513	0.384

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	0.186	0.181	0.919	-0.251	0.623
	Positive	-0.323	0.177	0.209	-0.749	0.104
Neutral	Negative	-0.186	0.181	0.919	-0.623	0.251
	Positive	-0.508	0.178	0.014	-0.936	-0.081
Positive	Negative	0.323	0.177	0.209	-0.104	0.749
	Neutral	0.508	0.178	0.014	0.081	0.936

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

***Panel D**: Planned Contrasts*

Hypothesis	Comparisons:	F-Value	p-value (two-tailed)
H1a	Negative Performance, Limited vs. Hybrid LtoR	0.180	0.672
H1a	Negative Performance, Limited vs. Hybrid RtoL	1.057	0.305
H1a	Negative Performance, Limited vs. Reasonable	4.579	0.033
H1a	Negative Performance, Hybrid LtoR vs. Hybrid RtoL	2.092	0.149
H1a	Negative Performance, Hybrid LtoR vs. Reasonable	6.702	0.010
H1a	Negative Performance, Hybrid RtoL vs. Reasonable	1.057	0.305
H1b	Limited Assurance, Positive vs. Negative	5.968	0.015
H1b	Hybrid LtoR Assurance, Positive vs. Negative	2.696	0.102
H1b	Hybrid RtoL Assurance, Positive vs. Negative	1.113	0.292
H1b	Reasonable Assurance, Positive vs. Negative	1.763	0.185
H2	Positive Performance, Limited vs. Reasonable	2.505	0.115
H3	Positive Performance, Hybrid LtoR vs. Limited	1.411	0.236
H3	Positive Performance, Hybrid RtoL vs. Limited	0.067	0.796
H3	Positive Performance, Hybrid LtoR vs. Reasonable	0.183	0.669
H3	Positive Performance, Hybrid RtoL vs. Reasonable	1.881	0.171

TABLE 9
NONPARAMETRIC TESTS WITH RELIABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Hybrid LtoR) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	21	22.36	469.56	0.189	0.850
Hybrid (LtoR) Assurance	22	21.66	476.52		

***Panel B**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Hybrid RtoL) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	21	18.40	386.40	-0.985	0.325
Hybrid (RtoL) Assurance	18	21.86	393.48		

***Panel C**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	21	18.12	380.52	1.899	0.058
Reasonable Assurance	21	24.88	522.48		

***Panel D**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Hybrid RtoL) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	22	18.64	410.08	1.162	0.245
Hybrid (RtoL) Assurance	18	22.78	410.04		

***Panel E**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	22	18.52	407.44	1.977	0.048
Reasonable Assurance	21	25.64	538.44		

***Panel F**: Mann-Whitney U Test for the Effect of Assurance (Hybrid RtoL vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (RtoL) Assurance	18	18.83	338.94	0.645	0.519
Reasonable	21	21.00	441.00		

***Panel G**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	27.04	676.00	2.149	0.032
Negative Performance	21	19.29	405.09		

***Panel H**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Hybrid (LtoR) Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	21	23.64	496.44	0.876	0.381
Negative Performance	22	20.43	449.46		

***Panel I**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Hybrid (RtoL) Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	27	24.00	648.00	0.682	0.495
Negative Performance	18	21.50	387.00		

***Panel J**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Reasonable Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	18	16.64	299.52	-1.871	0.061
Negative Performance	21	22.88	480.48		

***Panel K**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across All Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	90.74	8257.34	1.116	0.265
Negative Performance	82	82.85	6793.70		

***Panel L**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	25.04	626.00	-2.169	0.030
Reasonable Assurance	18	17.78	320.04		

***Panel M**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	63	58.65	3694.95	0.494	0.621
Reasonable Assurance	56	61.52	3445.12		

***Panel N**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Limited) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	21	20.33	426.93	1.657	0.097
Limited Assurance	25	26.16	654.00		

***Panel O**: Mann-Whitney U Test for the Effect of Assurance (Hybrid RtoL vs. Limited) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (RtoL) Assurance	27	26.85	724.95	-0.204	0.838
Limited Assurance	25	26.12	653.00		

***Panel P**: Mann-Whitney U Test for the Effect of Assurance (Hybrid LtoR vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (LtoR) Assurance	21	20.69	434.49	-0.438	0.661
Reasonable Assurance	18	19.19	345.42		

***Panel Q**: Mann-Whitney U Test for the Effect of Assurance (Hybrid RtoL vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (RtoL) Assurance	27	25.83	697.41	-1.941	0.052
Reasonable Assurance	18	18.75	337.50		

***Panel R**: Mann-Whitney U Test for the Effect of Assurance (Hybrid (combined) vs. Limited) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (combined) Assur.	48	35.81	1718.88	0.744	0.457
Limited Assurance	25	39.28	982.00		

***Panel S**: Mann-Whitney U Test for the Effect of Assurance (Hybrid (combined) vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Hybrid (combined) Assur.	48	35.40	1699.20	-1.416	0.157
Reasonable Assurance	18	28.44	511.92		

***Panel T**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. Hybrid LtoR) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	21	25.64	538.44	1.977	0.048
Hybrid (LtoR) Assurance	22	18.52	407.44		

***Panel U**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Neutral) in the Hybrid (RtoL) Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	27	29.44	794.88	2.908	0.004
Neutral Performance	21	18.14	380.94		

***Panel V**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	27.04	676.00	2.149	0.032
Negative Performance	21	19.29	405.09		

***Panel W**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Neutral) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	25.42	635.50	2.886	0.004
Neutral Performance	17	15.74	267.58		

TABLE 10
CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				
	Limited	**Hybrid (LtoR)**	**Hybrid (RtoL)**	**Reasonable**	**Totals**
Positive	2.0800 (0.6403) n = 25	2.0000 (0.7746) n = 21	1.7778 (0.6980) n = 27	1.6111 (1.0922) n = 18	1.8791 (0.8005) n = 91
Neutral	1.1765 (1.1851) n = 17	1.6333 (0.9279) n = 30	1.2381 (1.2209) n = 21	1.7647 (0.7525) n = 17	1.4706 (1.0418) n = 85
Negative	1.5000 (1.4058) n = 22	1.1818 (1.4019) n = 22	1.3333 (1.4142) n = 18	1.5714 (1.2071) n = 21	1.3976 (1.3429) n = 83
Totals	1.6406 (1.1460) n = 64	1.6027 (1.0896) n = 73	1.4848 (1.1128) n = 66	1.6429 (1.0345) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.459	0.395	0.756
Performance	2	5.696	4.902	0.008
Assurance * Performance	6	1.351	1.162	0.327

***Panel C**: Pairwise Comparison Results*

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	-0.057	0.169	1.000	-0.464	0.351
	Positive	-0.471	0.165	0.014	-0.868	-0.073
Neutral	Negative	0.057	0.169	1.000	-0.351	0.464
	Positive	-0.414	0.166	0.040	-0.814	-0.014
Positive	Negative	0.471	0.165	0.014	0.073	0.868
	Neutral	0.414	0.166	0.040	0.014	0.814

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 11
NONPARAMETRIC TESTS WITH MANAGEMENT CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Neutral) across All Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	97.60	8881.60	2.655	0.008
Neutral Performance	85	78.76	6694.60		

***Panel B**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across All Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	95.30	8672.30	2.267	0.023
Negative Performance	83	78.95	6552.85		

TABLE 12
CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT FORTHCOMINGNESS AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				
	Limited	Hybrid (LtoR)	Hybrid (RtoL)	Reasonable	Totals
Positive	2.0800 (0.7024) n = 25	2.0000 (0.7071) n = 21	1.6296 (0.9667) n = 27	1.6667 (1.1882) n = 18	1.8462 (0.9058) n = 91
Neutral	1.2353 (1.1473) n = 17	1.5667 (1.1351) n = 30	0.8571 (1.3523) n = 21	1.7647 (0.9701) n = 17	1.3647 (1.1937) n = 85
Negative	1.5455 (1.1843) n = 22	1.3182 (1.5549) n = 22	1.4444 (1.4642) n = 18	1.7619 (1.4108) n = 21	1.5181 (1.3913) n = 83
Totals	1.6719 (1.0549) n = 64	1.6164 (1.1976) n = 73	1.3333 (1.2690) n = 66	1.7321 (1.1984) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	2.055	1.508	0.213
Performance	2	5.279	3.873	0.022
Assurance * Performance	6	1.462	1.072	0.380

***Panel C**: Pairwise Comparison Results*

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	0.162	0.183	1.000	-0.279	0.602
	Positive	-0.327	0.179	0.206	-0.757	0.104
Neutral	Negative	-0.162	0.183	1.000	-0.602	0.279
	Positive	-0.488	0.180	0.021	-0.921	-0.055
Positive	Negative	0.327	0.179	0.206	-0.104	0.757
	Neutral	0.488	0.180	0.021	0.055	0.921

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 13
NONPARAMETRIC TESTS WITH MANAGEMENT FORTHCOMINGNESS AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Neutral) across All Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	98.05	8922.55	2.706	0.007
Neutral Performance	85	78.27	6652.95		

TABLE 14
CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT TRUSTWORTHINESS AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				Totals
	Limited	Hybrid (LtoR)	Hybrid (RtoL)	Reasonable	
Positive	2.0000 (0.6455) n = 25	1.9524 (0.7400) n = 21	1.6296 (0.8835) n = 27	1.3889 (1.2897) n = 18	1.7582 (0.9109) n = 91
Neutral	0.8824 (1.2187) n = 17	1.3667 (1.0662) n = 30	0.8571 (1.3887) n = 21	1.5882 (0.9393) n = 17	1.1882 (1.1801) n = 85
Negative	1.4091 (1.4027) n = 22	1.1364 (1.3903) n = 22	1.2222 (1.5551) n = 18	1.3500 (1.2258) n = 20	1.2805 (1.3723) n = 82
Totals	1.500 (1.1819) n = 64	1.4658 (1.1314) n = 73	1.2727 (1.2836) n = 66	1.4364 (1.1509) n = 55	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.797	0.593	0.620
Performance	2	7.860	5.580	0.003
Assurance * Performance	6	1.817	1.352	0.235

***Panel C**: Pairwise Comparison Results*

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	0.106	0.182	1.000	-0.333	0.545
	Positive	-0.463	0.178	0.029	-0.892	-0.035
Neutral	Negative	-0.106	0.182	1.000	-0.545	0.333
	Positive	-0.569	0.178	0.005	-0.999	-0.139
Positive	Negative	0.463	0.178	0.029	0.035	0.892
	Neutral	0.569	0.178	0.005	0.139	0.999

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 15
NONPARAMETRIC TESTS WITH MANAGEMENT TRUSTWORTHINESS AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Neutral) across All Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	100.51	9146.41	3.448	0.001
Neutral Performance	85	75.64	6429.40		

***Panel B**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across All Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	94.31	8582.21	2.155	0.031
Negative Performance	82	78.89	6468.98		

TABLE 16
CELL MEANS AND PARAMETRIC TESTS WITH INVESTMENT OPPORTUNITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				Totals
	Limited	Hybrid (LtoR)	Hybrid (RtoL)	Reasonable	
Positive	1.9200 (0.8622) n = 25	1.9524 (1.2440) n = 21	1.6296 (1.1145) n = 27	1.4444 (1.3382) n = 18	1.7473 (1.1313) n = 91
Neutral	0.6471 (1.2719) n = 17	0.7667 (1.0063) n = 30	0.3333 (1.0646) n = 21	0.9412 (0.8269) n = 17	0.6706 (1.0509) n = 85
Negative	-0.2727 (1.6090) n = 22	0.0000 (1.2724) n = 22	-0.4444 (1.4234) n = 18	-0.5714 (1.5353) n = 21	-0.3133 (1.4561) n = 83
Totals	0.8281 (1.5691) n = 64	0.8767 (1.3738) n = 73	0.6515 (1.4623) n = 66	0.5357 (1.5488) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	2.068	1.380	0.250
Performance	2	90.739	60.519	< 0.001
Assurance * Performance	6	0.875	0.584	0.743

***Panel C**: Pairwise Comparison Results*

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	-0.994	0.192	< 0.001	-1.457	-0.532
	Positive	-2.059	0.187	< 0.001	-2.510	-1.607
Neutral	Negative	0.994	0.192	< 0.001	0.532	1.457
	Positive	-1.065	0.188	< 0.001	-1.519	-0.610
Positive	Negative	2.059	0.187	< 0.001	1.607	2.510
	Neutral	1.065	0.188	< 0.001	0.610	1.519

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 17
NONPARAMETRIC TESTS WITH INVESTMENT OPPORTUNITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Neutral) across all Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	109.80	9991.80	5.904	< 0.001
Neutral Performance	85	65.70	5584.50		

***Panel B**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across all Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	117.20	10665.20	8.274	< 0.001
Negative Performance	83	54.94	4560.02		

***Panel C**: Mann-Whitney U Test for the Effect of Performance (Neutral vs. Negative) across all Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Neutral Performance	85	100.97	8582.45	4.553	< 0.001
Negative Performance	83	67.63	5613.29		

TABLE 18
CELL MEANS AND PARAMETRIC TESTS WITH LEVEL OF VERIFICATION AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				
	Limited	**Hybrid (LtoR)**	**Hybrid (RtoL)**	**Reasonable**	**Totals**
Positive	4.0800 (1.1518) n = 25	4.2381 (0.9437) n = 21	4.3704 (0.7917) n = 27	4.0556 (0.9376) n = 18	4.1978 (0.9571) n = 91
Neutral	3.9375 (1.0626) n = 16	3.9667 (1.1886) n = 30	3.8095 (1.2091) n = 21	4.2353 (1.1473) n = 17	3.9762 (1.1510) n = 84
Negative	3.2273 (1.1519) n = 22	4.1364 (0.8888) n = 22	4.1111 (1.4507) n = 18	4.0476 (0.9735) n = 21	3.8675 (1.1663) n = 83
Totals	3.7460 (1.1773) n = 63	4.0959 (1.0296) n = 73	4.1212 (1.1438) n = 66	4.1071 (1.0032) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	1.992	1.700	0.168
Performance	2	2.066	1.763	0.174
Assurance * Performance	6	1.510	1.288	0.263

TABLE 19
CELL MEANS AND PARAMETRIC TESTS WITH CONFIDENCE AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				
	Limited	**Hybrid (LtoR)**	**Hybrid (RtoL)**	**Reasonable**	**Totals**
Positive	2.0400 (0.7349) n = 25	1.9500 (0.7592) n = 20	1.7778 (0.8916) n = 27	1.5556 (1.0966) n = 18	1.8444 (0.8730) n = 90
Neutral	1.1176 (1.6539) n = 17	1.5667 (1.2508) n = 30	1.2500 (1.0699) n = 20	1.7059 (1.1048) n = 17	1.4286 (1.2733) n = 84
Negative	1.4091 (1.6521) n = 22	1.5000 (1.2247) n = 22	1.8333 (1.4246) n = 18	1.7619 (1.2611) n = 21	1.6145 (1.3866) n = 83
Totals	1.5781 (1.4007) n = 64	1.6528 (1.1279) n = 72	1.6308 (1.1260) n = 65	1.6786 (1.1459) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.317	0.221	0.882
Performance	2	3.693	2.581	0.078
Assurance * Performance	6	1.461	1.021	0.412

***Panel C**: Pairwise Comparison Results*

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	0.216	0.188	0.755	-0.237	0.669
	Positive	-0.205	0.184	0.797	-0.647	0.238
Neutral	Negative	-0.216	0.188	0.755	-0.669	0.237
	Positive	-0.421	0.185	0.072	-0.867	0.026
Positive	Negative	0.205	0.184	0.797	-0.238	0.647
	Neutral	0.421	0.185	0.072	-0.026	0.867

Based on estimated marginal means;

* Adjustment for multiple comparisons: Bonferroni.

TABLE 20
NON-PARAMETRIC TESTS WITH CONFIDENCE AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Neutral) across all Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	90	94.89	8540.10	2.136	0.033
Neutral Performance	84	79.58	6684.72		

TABLE 21
CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT MOTIVE TO INCREASE CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				
	Limited	**Hybrid (LtoR)**	**Hybrid (RtoL)**	**Reasonable**	**Totals**
Positive	2.3600 (0.6377) n = 25	2.2381 (1.4108) n = 21	2.4444 (0.8916) n = 27	2.0556 (0.7254) n = 18	2.2967 (0.9486) n = 91
Neutral	2.0588 (1.0290) n = 17	2.0000 (1.1447) n = 30	1.8095 (0.8729) n = 21	2.2353 (1.1473) n = 17	2.0118 (1.0521) n = 85
Negative	1.9545 (1.2141) n = 22	1.8182 (1.3323) n = 22	1.4444 (1.8542) n = 18	2.1905 (1.3645) n = 21	1.8675 (1.4379) n = 83
Totals	2.1406 (0.9737) n = 64	2.0137 (1.2747) n = 73	1.9697 (1.2767) n = 66	2.1607 (1.1083) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	0.848	0.626	0.599
Performance	2	3.873	2.861	0.059
Assurance * Performance	6	1.193	0.881	0.509

***Panel C**: Pairwise Comparison Results*

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	-0.174	0.182	1.000	-0.613	0.265
	Positive	-0.423	0.178	0.055	-0.852	0.006
Neutral	Negative	0.174	0.182	1.000	-0.265	0.613
	Positive	-0.249	0.179	0.498	-0.680	0.183
Positive	Negative	0.423	0.178	0.055	-0.006	0.852
	Neutral	0.249	0.179	0.498	-0.183	0.680

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 22
NONPARAMETRIC TESTS WITH MANAGEMENT MOTIVE TO INCREASE CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across all Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	91	93.34	8493.94	1.725	0.085
Negative Performance	83	81.10	6731.30		

TABLE 23
CELL MEANS AND PARAMETRIC TESTS WITH CREDIBILITY INCREASE FROM ASSURANCE AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				
	Limited	**Hybrid (LtoR)**	**Hybrid (RtoL)**	**Reasonable**	**Totals**
Positive	2.0000 (0.9129) n = 25	2.1429 (0.7928) n = 21	2.1111 (0.8916) n = 27	1.5882 (1.2277) n = 17	1.9889 (0.9539) n = 90
Neutral	1.3529 (1.4976) n = 17	1.5667 (1.0727) n = 30	1.3810 (1.1609) n = 21	2.0000 (0.9354) n = 17	1.5647 (1.1695) n = 85
Negative	1.1364 (1.5825) n = 22	1.5000 (1.5660) n = 22	1.5000 (1.7905) n = 18	2.0952 (1.0443) n = 21	1.5542 (1.5242) n = 83
Totals	1.5312 (1.3682) n = 64	1.7121 (1.1958) n = 73	1.7121 (1.2981) n = 66	1.9091 (1.0762) n = 55	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	1.603	1.072	0.362
Performance	2	4.418	2.954	0.054
Assurance * Performance	6	2.211	1.478	0.186

***Panel C**: Pairwise Comparison Results*

Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
					Lower Bound	Upper Bound
Negative	Neutral	-0.017	0.192	1.000	-0.479	0.445
	Positive	-0.403	0.188	0.099	-0.856	0.050
Neutral	Negative	0.017	0.192	1.000	-0.445	0.479
	Positive	-0.385	0.189	0.127	-0.841	0.070
Positive	Negative	0.403	0.188	0.099	-0.050	0.856
	Neutral	0.385	0.189	0.127	-0.070	0.841

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 24
NONPARAMETRIC TESTS WITH CREDIBILITY INCREASE FROM ASSURANCE AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across all Assurance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	90	91.96	8276.40	1.415	0.157
Negative Performance	83	81.63	6775.29		

TABLE 25
CELL MEANS AND PARAMETRIC TESTS WITH BELIEVABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance				Totals
	Limited	Hybrid (LtoR)	Hybrid (RtoL)	Reasonable	
Positive	2.0800 (0.8124) n = 25	2.0952 (0.7684) n = 21	2.1538 (0.8339) n = 26	1.6667 (1.4552) n = 18	2.0222 (0.9713) n = 90
Neutral	1.3529 (1.5788) n = 17	1.6333 (0.9994) n = 30	1.6667 (1.1106) n = 21	1.9412 (1.1440) n = 17	1.6471 (1.1823) n = 85
Negative	1.2727 (1.3516) n = 22	1.6818 (1.4272) n = 22	1.9444 (0.9984) n = 18	2.1905 (1.1234) n = 21	1.7590 (1.2744) n = 83
Totals	1.6094 (1.2801) n = 64	1.7808 (1.0960) n = 73	1.9385 (0.9823) n = 65	1.9464 (1.2420) n = 56	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	3	1.753	1.353	0.258
Performance	2	2.680	2.068	0.129
Assurance * Performance	6	1.785	1.378	0.224

TABLE 26
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH RELIABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive	1.4545 (1.2013) n = 33	1.5556 (0.9835) n = 18	2.1200 (0.5260) n = 25	1.6974 (1.0069) n = 76
Negative	2.0000 (0.9847) n = 34	2.0476 (0.9207) n = 21	1.2857 (1.5857) n = 21	1.8158 (1.1968) n = 76
Totals	1.7313 (1.1225) n = 67	1.8205 (0.9699) n = 39	1.7391 (1.2006) n = 46	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	2	0.110	0.096	0.909
Performance	1	0.165	0.143	0.706
Assurance * Performance	2	7.383	6.397	0.002

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-0.834	0.318	0.010	-1.463	-0.206
	Positive	Negative	0.834	0.318	0.010	0.206	1.463
No Assurance	Negative	Positive	0.545	0.263	0.039	0.027	1.064
	Positive	Negative	-0.545	0.263	0.039	-1.064	-0.027
Reasonable	Negative	Positive	0.492	0.345	0.156	-0.190	1.174
	Positive	Negative	-0.492	0.345	0.156	-1.174	0.190

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	No Assurance	-0.714	0.298	0.054	-1.436	0.008
		Reasonable	-0.762	0.332	0.069	-1.565	0.041
	No Assurance	Limited	0.714	0.298	0.054	-0.008	1.436
		Reasonable	-0.048	0.298	1.000	-0.770	0.675
	Reasonable	Limited	0.762	0.332	0.069	-0.041	1.565
		No Assurance	0.048	0.298	1.000	-0.675	0.770
Positive	Limited	No Assurance	0.665	0.285	0.063	-0.024	1.355
		Reasonable	0.564	0.332	0.274	-0.240	1.369
	No Assurance	Limited	-0.665	0.285	0.063	-1.355	0.024
		Reasonable	-0.101	0.315	1.000	-0.863	0.661
	Reasonable	Limited	-0.564	0.332	0.274	-1.369	0.240
		No Assurance	0.101	0.315	1.000	-0.661	0.863

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

***Panel D**: Planned Contrasts*

Comparisons:	F-Value	p-value (two-tailed)
Positive Performance, Reasonable vs. No Assurance	0.103	0.749
Negative Performance, Reasonable vs. No Assurance	0.026	0.873
Positive Performance, Limited vs. No Assurance	5.458	0.021
Negative Performance, Limited vs. No Assurance	5.739	0.018

TABLE 27
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH RELIABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	21	18.12	380.52	1.899	0.058
Reasonable Assurance	21	24.88	522.48		

***Panel B**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	21	23.36	490.56	1.770	0.077
No Assurance	34	30.87	1049.58		

***Panel C**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. No Assurance) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	21	28.40	596.40	0.158	0.874
No Assurance	34	27.75	943.50		

***Panel D**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	27.04	676.00	2.149	0.032
Negative Performance	21	19.29	405.09		

***Panel E**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Reasonable Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	18	16.64	299.52	-1.871	0.061
Negative Performance	21	22.88	480.48		

***Panel F**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the No Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	33	29.59	976.47	-1.910	0.056
Negative Performance	34	38.28	1301.52		

***Panel G**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Assurance Condition (Limited and Reasonable Collapsed)*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	43	43.70	1879.10	0.290	0.772
Negative Performance	42	42.29	1776.18		

***Panel H**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	25.04	626.00	-2.169	0.030
Reasonable Assurance	18	17.78	320.04		

***Panel I**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	34.60	865.00	-2.189	0.029
No Assurance	33	25.64	846.12		

***Panel J**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. No Assurance) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	18	26.36	474.48	0.135	0.893
No Assurance	33	25.80	851.40		

***Panel K**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across All Assurance Conditions (i.e., Limited, Reasonable, and No Assurance)*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	76	72.74	5528.24	-1.126	0.260
Negative Performance	76	80.26	6099.76		

***Panel L**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	46	57.59	2649.14	-0.168	0.867
No Assurance	67	56.60	3792.20		

***Panel M**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. No Assurance) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	39	54.42	2122.38	0.250	0.803
No Assurance	67	52.96	3548.32		

***Panel N**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	46	42.78	1967.88	0.097	0.923
Reasonable Assurance	39	43.26	1687.14		

TABLE 28
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH PERCEIVED DISCLOSURE CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive	1.6667 (1.0801) n = 33	1.8333 (0.9852) n = 18	2.0800 (0.4933) n = 25	1.8421 (0.9100) n = 76
Negative	2.2647 (0.7904) n = 34	2.0000 (0.9487) n = 21	1.6364 (1.5900) n = 22	2.0130 (1.1297) n = 77
Totals	1.9701 (0.9843) n = 67	1.9231 (0.9566) n = 39	1.8723 (1.1538) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	2	0.160	0.155	0.857
Performance	1	0.415	0.403	0.526
Assurance * Performance	2	3.737	3.629	0.029

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-0.444	0.297	0.137	-1.030	0.143
	Positive	Negative	0.444	0.297	0.137	-0.143	1.030
No Assurance	Negative	Positive	0.598	0.248	0.017	0.108	1.088
	Positive	Negative	-0.598	0.248	0.017	-1.088	-0.108
Reasonable	Negative	Positive	0.167	0.326	0.610	-0.478	0.811
	Positive	Negative	-0.167	0.326	0.610	-0.811	0.478

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	No Assurance	-0.628	0.278	0.075	-1.301	0.044
		Reasonable	-0.364	0.310	0.726	-1.113	0.386
	No Assurance	Limited	0.628	0.278	0.075	-0.044	1.301
		Reasonable	0.265	0.282	1.000	-0.417	0.947
	Reasonable	Limited	0.364	0.310	0.726	-0.386	1.113
		No Assurance	-0.265	0.282	1.000	-0.947	0.417
Positive	Limited	No Assurance	0.413	0.269	0.380	-0.238	1.065
		Reasonable	0.247	0.314	1.000	-0.513	1.006
	No Assurance	Limited	-0.413	0.269	0.380	-1.065	0.238
		Reasonable	-0.167	0.297	1.000	-0.887	0.553
	Reasonable	Limited	-0.247	0.314	1.000	-1.006	0.513
		No Assurance	0.167	0.297	1.000	-0.553	0.887

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

***Panel D**: Planned Contrasts*

Comparisons:	F-Value	p-value (two-tailed)
Positive Performance, Reasonable vs. No Assurance	0.314	0.576
Negative Performance, Reasonable vs. No Assurance	0.883	0.349
Positive Performance, Limited vs. No Assurance	2.360	0.127
Negative Performance, Limited vs. No Assurance	5.121	0.025

TABLE 29
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH PERCEIVED DISCLOSURE CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	22	21.43	471.46	0.326	0.745
Reasonable Assurance	21	22.60	474.60		

***Panel B**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	22	25.14	553.08	1.332	0.183
No Assurance	34	30.68	1043.12		

***Panel C**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. No Assurance) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	21	25.29	531.09	-1.072	0.284
No Assurance	34	29.68	1009.12		

***Panel D**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	24.34	608.50	0.206	0.837
Negative Performance	22	23.61	519.42		

***Panel E**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Reasonable Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	18	19.06	343.08	-0.542	0.588
Negative Performance	21	20.81	437.01		

***Panel F**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the No Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	33	28.50	940.50	-2.444	0.015
Negative Performance	34	39.34	1337.56		

***Panel G**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Assurance Condition (Limited and Reasonable Collapsed)*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	43	43.05	1851.15	-0.191	0.849
Negative Performance	43	43.95	1889.85		

***Panel H**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	22.68	567.00	-0.531	0.595
Reasonable Assurance	18	21.06	379.08		

***Panel I**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	32.46	811.50	-1.338	0.181
No Assurance	33	27.26	899.58		

***Panel J**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. No Assurance) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	18	27.50	495.00	0.592	0.554
No Assurance	33	25.18	830.94		

***Panel K**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) across All Assurance Conditions (i.e., Limited, Reasonable, and No Assurance)*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	76	70.95	5392.20	-1.846	0.065
Negative Performance	77	82.97	6388.69		

***Panel L**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	47	56.41	2651.27	0.321	0.748
No Assurance	67	58.26	3903.42		

***Panel M**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. No Assurance) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	39	52.26	2038.14	-0.346	0.729
No Assurance	67	54.22	3632.74		

***Panel N**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. Reasonable) across All Performance Conditions*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	47	43.62	2050.14	-0.054	0.957
Reasonable Assurance	39	43.36	1691.04		

TABLE 30
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive	1.5758 (1.1189) n = 33	1.6111 (1.0922) n = 18	2.0800 (0.6403) n = 25	1.7500 (0.9950) n = 76
Negative	1.6471 (1.1516) n = 34	1.5714 (1.2071) n = 21	1.5000 (1.4058) n = 22	1.5844 (1.2285) n = 77
Totals	1.6119 (1.1276) n = 67	1.5897 (1.1406) n = 39	1.8085 (1.0962) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	2	0.566	0.451	0.638
Performance	1	1.211	0.964	0.328
Assurance * Performance	2	1.550	1.234	0.294

TABLE 31
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT FORTHCOMINGNESS AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			
	No Assurance	Reasonable	Limited	Totals
Positive	1.4545 (1.2770) n = 33	1.6667 (1.1882) n = 18	2.0800 (0.7024) n = 25	1.7105 (1.1173) n = 76
Negative	2.0000 (1.1282) n = 34	1.7619 (1.4108) n = 21	1.5455 (1.1843) n = 22	1.8052 (1.2252) n = 77
Totals	1.7313 (1.2258) n = 67	1.7179 (1.2967) n = 39	1.8298 (0.9851) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	2	0.134	0.099	0.906
Performance	1	0.045	0.033	0.855
Assurance * Performance	2	4.018	2.963	0.055

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-0.535	0.340	0.118	-1.207	0.138
	Positive	Negative	0.535	0.340	0.118	-0.138	1.207
No Assurance	Negative	Positive	0.545	0.285	0.057	-0.017	1.108
	Positive	Negative	-0.545	0.285	0.057	-1.108	0.017
Reasonable	Negative	Positive	0.095	0.374	0.799	-0.644	0.834
	Positive	Negative	-0.095	0.374	0.799	-0.834	0.644

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	No Assurance	-0.455	0.319	0.467	-1.226	0.317
		Reasonable	-0.216	0.355	1.000	-1.077	0.644
	No Assurance	Limited	0.455	0.319	0.467	-0.317	1.226
		Reasonable	0.238	0.323	1.000	-0.544	1.021
	Reasonable	Limited	0.216	0.355	1.000	-0.644	1.077
		No Assurance	-0.238	0.323	1.000	-1.021	0.544
Positive	Limited	No Assurance	0.625	0.309	0.134	-0.122	1.373
		Reasonable	0.413	0.360	0.758	-0.458	1.285
	No Assurance	Limited	-0.625	0.309	0.134	-1.373	0.122
		Reasonable	-0.212	0.341	1.000	-1.038	0.614
	Reasonable	Limited	-0.413	0.360	0.758	-1.285	0.458
		No Assurance	0.212	0.341	1.000	-0.614	1.038

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 32
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH MANAGEMENT FORTHCOMINGNESS AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the No Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	33	29.38	969.54	-2.005	0.045
Negative Performance	34	38.49	1308.66		

***Panel B**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	26.78	669.50	1.571	0.116
Negative Performance	22	20.84	458.48		

***Panel C**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	33.96	849.00	-1.861	0.063
No Assurance	33	26.12	861.96		

TABLE 33
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT TRUSTWORTHINESS AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive	1.2727 (1.4636) n = 33	1.3889 (1.2897) n = 18	2.0000 (0.6455) n = 25	1.5395 (1.2376) n = 76
Negative	1.4706 (1.2367) n = 34	1.3500 (1.2258) n = 20	1.4091 (1.4027) n = 22	1.4211 (1.2677) n = 76
Totals	1.3731 (1.3466) n = 67	1.3684 (1.2395) n = 38	1.7234 (1.0975) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	2	1.802	1.158	0.317
Performance	1	0.744	0.478	0.490
Assurance * Performance	2	2.170	1.395	0.251

TABLE 34
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH INVESTMENT OPPORTUNITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive	1.6970 (1.0150) n = 33	1.4444 (1.3382) n = 18	1.9200 (0.8622) n = 25	1.7105 (1.0560) n = 76
Negative	-1.4118 (1.2581) n = 34	-0.5714 (1.5353) n = 21	-0.2727 (1.6090) n = 22	-0.8571 (1.5106) n = 77
Totals	0.1194 (1.9347) n = 67	0.3590 (1.7545) n = 39	0.8936 (1.6712) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	2	6.393	3.999	0.020
Performance	1	215.602	134.868	< 0.001
Assurance * Performance	2	4.743	2.967	0.055

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-2.193	0.370	< 0.001	-2.923	-1.462
	Positive	Negative	2.193	0.370	< 0.001	1.462	2.923
No Assurance	Negative	Positive	-3.109	0.309	< 0.001	-3.719	-2.498
	Positive	Negative	3.109	0.309	< 0.001	2.498	3.719
Reasonable	Negative	Positive	-2.016	0.406	< 0.001	-2.818	-1.213
	Positive	Negative	2.016	0.406	< 0.001	1.213	2.818

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	No Assurance	1.139	0.346	0.004	0.301	1.977
		Reasonable	0.299	0.386	1.000	-0.635	1.233
	No Assurance	Limited	-1.139	0.346	0.004	-1.977	-0.301
		Reasonable	-0.840	0.351	0.054	-1.690	0.009
	Reasonable	Limited	-0.299	0.386	1.000	-1.233	0.635
		No Assurance	0.840	0.351	0.054	-0.009	1.690
Positive	Limited	No Assurance	0.223	0.335	1.000	-0.589	1.035
		Reasonable	0.476	0.391	0.677	-0.471	1.422
	No Assurance	Limited	-0.223	0.335	1.000	-1.035	0.589
		Reasonable	0.253	0.370	1.000	-0.645	1.150
	Reasonable	Limited	-0.476	0.391	0.677	-1.422	0.471
		No Assurance	-0.253	0.370	1.000	-1.150	0.645

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 35
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH INVESTMENT OPPORTUNITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the No Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	33	49.59	1636.47	6.532	< 0.001
Negative Performance	34	18.87	641.58		

***Panel B**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	32.12	803.00	4.413	< 0.001
Negative Performance	22	14.77	324.94		

***Panel C**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Reasonable Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	18	27.03	486.54	3.615	< 0.001
Negative Performance	21	13.98	293.58		

***Panel D**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	22	35.84	788.48	-2.774	0.006
No Assurance	34	23.75	807.50		

***Panel E**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. No Assurance) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	21	33.45	702.45	2.038	0.042
No Assurance	34	24.63	837.42		

TABLE 36
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH LEVEL OF VERIFICATION AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive		4.0556 (0.9376) n = 18	4.0800 (1.1518) n = 25	4.0698 (1.0555) n = 43
Negative		4.0476 (0.9735) n = 21	3.2273 (1.1519) n = 22	3.6279 (1.1344) n = 43
Totals		4.0513 (0.9445) n = 39	3.6809 (1.2177) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	1	3.358	2.942	0.090
Performance	1	3.927	3.440	0.067
Assurance * Performance	1	3.783	3.315	0.072

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-0.853	0.312	0.008	-1.474	-0.231
	Positive	Negative	0.853	0.312	0.008	0.231	1.474
Reasonable	Negative	Positive	-0.008	0.343	0.982	-0.691	0.675
	Positive	Negative	0.008	0.343	0.982	-0.675	0.691

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	Reasonable	-0.820	0.326	0.014	-1.469	-0.172
	Reasonable	Limited	0.820	0.326	0.014	0.172	1.469
Positive	Limited	Reasonable	0.024	0.330	0.941	-0.633	0.681
	Reasonable	Limited	-0.024	0.330	0.941	-0.681	0.633

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 37
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH LEVEL OF VERIFICATION AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	28.12	703.00	2.266	0.023
Negative Performance	22	19.32	425.04		

***Panel B**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. Limited) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	21	26.33	552.93	2.297	0.022
Limited Assurance	22	17.86	392.92		

TABLE 38
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH CONFIDENCE AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive	1.2121 (1.2439) n = 33	1.5556 (1.0966) n = 18	2.0400 (0.7349) n = 25	1.5658 (1.1116) n = 76
Negative	2.0909 (0.7650) n = 33	1.7619 (1.2611) n = 21	1.4091 (1.6521) n = 22	1.8026 (1.2331) n = 76
Totals	1.6515 (1.1162) n = 66	1.6667 (1.1773) n = 39	1.7447 (1.2763) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	2	0.081	0.062	0.940
Performance	1	0.828	0.634	0.427
Assurance * Performance	2	7.810	5.977	0.003

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-0.631	0.334	0.061	-1.291	0.030
	Positive	Negative	0.631	0.334	0.061	-0.030	1.291
No Assurance	Negative	Positive	0.879	0.281	0.002	0.323	1.435
	Positive	Negative	-0.879	0.281	0.002	-1.435	-0.323
Reasonable	Negative	Positive	0.206	0.367	0.575	-0.519	0.932
	Positive	Negative	-0.206	0.367	0.575	-0.932	0.519

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	No Assurance	-0.682	0.315	0.096	-1.444	0.080
		Reasonable	-0.353	0.349	0.940	-1.197	0.492
	No Assurance	Limited	0.682	0.315	0.096	-0.080	1.444
		Reasonable	0.329	0.319	0.913	-0.444	1.102
	Reasonable	Limited	0.353	0.349	0.940	-0.492	1.197
		No Assurance	-0.329	0.319	0.913	-1.102	0.444
Positive	Limited	No Assurance	0.828	0.303	0.021	0.094	1.562
		Reasonable	0.484	0.353	0.517	-0.371	1.340
	No Assurance	Limited	-0.828	0.303	0.021	-1.562	-0.094
		Reasonable	-0.343	0.335	0.921	-1.155	0.468
	Reasonable	Limited	-0.484	0.353	0.517	-1.340	0.371
		No Assurance	0.343	0.335	0.921	-0.468	1.155

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 39
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH CONFIDENCE AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the No Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	33	26.74	882.42	-3.018	0.003
Negative Performance	33	40.26	1328.58		

***Panel B**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	25.70	642.50	0.992	0.321
Negative Performance	22	22.07	485.54		

***Panel C**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	22	25.11	552.42	1.160	0.246
No Assurance	33	29.92	987.36		

***Panel D**: Mann-Whitney U Test for the Effect of Assurance (Limited vs. No Assurance) in the Positive Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Assurance	25	36.26	906.50	-2.846	0.004
No Assurance	33	24.38	804.54		

TABLE 40
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH MANAGEMENT MOTIVE TO INCREASE CREDIBILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive		2.0556 (0.7254) n = 18	2.3600 (0.6377) n = 25	2.2326 (0.6844) n = 43
Negative		2.1905 (1.3645) n = 21	1.9545 (1.2141) n = 22	2.0698 (1.2798) n = 43
Totals		2.1282 (1.1045) n = 39	2.1702 (0.9628) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	1	0.025	0.023	0.879
Performance	1	0.388	0.366	0.547
Assurance * Performance	1	1.548	1.461	0.230

TABLE 41
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH CREDIBILITY INCREASE FROM ASSURANCE AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive		1.5882 (1.2277) n = 17	2.0000 (0.9129) n = 25	1.8333 (1.0573) n = 42
Negative		2.0952 (1.0443) n = 21	1.1364 (1.5825) n = 22	1.6047 (1.4166) n = 43
Totals		1.8684 (1.1430) n = 38	1.5957 (1.3296) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	1	1.560	1.066	0.305
Performance	1	0.663	0.453	0.503
Assurance * Performance	1	9.790	6.691	0.011

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-0.864	0.354	0.017	-1.567	-0.160
	Positive	Negative	0.864	0.354	0.017	0.160	1.567
Reasonable	Negative	Positive	0.507	0.395	0.203	-0.278	1.292
	Positive	Negative	-0.507	0.395	0.203	-1.292	0.278

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	Reasonable	-0.959	0.369	0.011	-1.693	-0.225
	Reasonable	Limited	0.959	0.369	0.011	0.225	1.693
Positive	Limited	Reasonable	0.412	0.380	0.282	-0.345	1.168
	Reasonable	Limited	-0.412	0.380	0.282	-1.168	0.345

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 42
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH CREDIBILITY INCREASE FROM ASSURANCE AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	27.52	688.00	1.940	0.052
Negative Performance	22	20.00	440.00		

***Panel B**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. Limited) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	21	26.00	546.00	2.115	0.034
Limited Assurance	22	18.18	399.96		

TABLE 43
SUPPLEMENTAL ANALYSES: CELL MEANS AND PARAMETRIC TESTS WITH BELIEVABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Firm Performance	Assurance			Totals
	No Assurance	Reasonable	Limited	
Positive		1.6667 (1.4552) n = 18	2.0800 (0.8124) n = 25	1.9070 (1.1300) n = 43
Negative		2.1905 (1.1234) n = 21	1.2727 (1.3516) n = 22	1.7209 (1.3152) n = 43
Totals		1.9487 (1.2967) n = 39	1.7021 (1.1594) n = 47	

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance	1	1.349	0.958	0.331
Performance	1	0.426	0.303	0.584
Assurance * Performance	1	9.393	6.672	0.012

***Panel C**: Pairwise Comparison Results*

Assurance	Performance	Performance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Limited	Negative	Positive	-0.807	0.347	0.022	-1.497	-0.117
	Positive	Negative	0.807	0.347	0.022	0.117	1.497
Reasonable	Negative	Positive	0.524	0.381	0.173	-0.234	1.282
	Positive	Negative	-0.524	0.381	0.173	-1.282	0.234

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

Performance	Assurance	Assurance	Mean Difference	Std. Error	Sig.*	95% Confidence Interval for Difference*	
						Lower Bound	Upper Bound
Negative	Limited	Reasonable	-0.918	0.362	0.013	-1.638	-0.198
	Reasonable	Limited	0.918	0.362	0.013	0.198	1.638
Positive	Limited	Reasonable	0.413	0.367	0.263	-0.316	1.143
	Reasonable	Limited	-0.413	0.367	0.263	-1.143	0.316

Based on estimated marginal means

* Adjustment for multiple comparisons: Bonferroni.

TABLE 44
SUPPLEMENTAL ANALYSES: NONPARAMETRIC TESTS WITH BELIEVABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the Effect of Performance (Positive vs. Negative) in the Limited Assurance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Positive Performance	25	27.82	695.50	2.137	0.033
Negative Performance	22	19.66	432.52		

***Panel B**: Mann-Whitney U Test for the Effect of Assurance (Reasonable vs. Limited) in the Negative Performance Condition*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Reasonable Assurance	21	26.86	564.06	2.604	0.009
Limited Assurance	22	17.36	381.92		

TABLE 45
CELL MEANS AND PARAMETRIC TESTS WITH PERCEIVED RELIABILITY AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Limited Assurance		Reasonable Assurance		
Conclusion	**Scope and Conclusion**	**Opinion**	**Scope and Opinion**	**Totals**
1.4444 1.6251 n = 27	1.8235 0.9510 n = 17	1.7000 1.1743 n = 20	1.5625 1.5479 n = 16	1.6125 1.3640 n = 80

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance Statement(s)	3	0.571	0.299	0.826

***Panel C**: Planned Contrasts*

Comparisons:	p-value (two-tailed)
Limited Conclusion vs. Limited Scope & Conclusion	0.379
Limited Conclusion vs. Reasonable Opinion	0.533
Limited Conclusion vs. Reasonable Scope & Opinion	0.787
Limited Scope & Conclusion vs. Reasonable Opinion	0.787
Limited Scope & Conclusion vs. Reasonable Scope & Opinion	0.589
Reasonable Opinion vs. Reasonable Scope & Opinion	0.768

TABLE 46
CELL MEANS AND PARAMETRIC TESTS WITH EXTENT OF VERIFICATION AS THE DEPENDENT VARIABLE

***Panel A**: Mean (Standard Deviation)*

Limited Assurance		Reasonable Assurance		
Conclusion	**Scope and Conclusion**	**Conclusion**	**Scope and Conclusion**	**Totals**
5.0741	5.0588	5.5500	6.0625	5.3875
2.0177	1.6760	1.3169	1.4361	1.6951
n = 27	n = 17	n = 20	n = 16	n = 80

***Panel B**: ANOVA Results*

Source	DF	MSE	F-Stat	p-value (two-tailed)
Assurance Statement(s)	3	4.102	1.452	0.234

***Panel C**: Planned Contrasts*

Comparisons:	p-value (two-tailed)
Limited Conclusion vs. Limited Scope & Conclusion	0.977
Limited Conclusion vs. Reasonable Opinion	0.340
Limited Conclusion vs. Reasonable Scope & Opinion	0.066
Limited Scope & Conclusion vs. Reasonable Opinion	0.378
Limited Scope & Conclusion vs. Reasonable Scope & Opinion	0.091
Reasonable Opinion vs. Reasonable Scope & Opinion	0.366

TABLE 47
NONPARAMETRIC TESTS WITH EXTENT OF VERIFICATION AS THE DEPENDENT VARIABLE

***Panel A**: Mann-Whitney U Test for the difference in: Limited Conclusion vs. Reasonable Scope & Opinion*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Conclusion	27	19.78	534.06	1.545	0.122
Reasonable Scope & Opinion	16	25.75	412.00		

***Panel B**: Mann-Whitney U Test for the difference in: Limited Scope & Conclusion vs. Reasonable Scope & Opinion*

Source of Variation	N	Mean Rank	Sum of Rank	Z	p-value (two-tailed)
Limited Scope & Conclusion	17	14.18	241.06	1.780	0.075
Reasonable Scope & Opinion	16	20.00	320.00		

TABLE 48
PEARSON AND SPEARMAN CORRELATIONS OF DEPENDENT VARIABLES

		DV1	DV2	DV4	DV5	DV6	DV7	DV8	DV9	DV10	DV11	DV12
	Correlation	1	0.799	0.823	0.184	0.686	0.684	0.662	0.309	0.516	0.561	0.516
DV1	Sig. (2-tailed)		**< 0.001**	**< 0.001**	**0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**
	N	353	350	352	353	353	353	352	259	258	258	258
	Correlation	0.761	1	0.754	0.158	0.637	0.690	0.627	0.361	0.543	0.557	0.531
DV2	Sig. (2-tailed)	**< 0.001**		**< 0.001**	**0.003**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**
	N	350	350	349	350	350	350	349	257	256	256	256
	Correlation	0.778	0.726	1	0.223	0.711	0.716	0.695	0.415	0.470	0.624	0.591
DV4	Sig. (2-tailed)	**< 0.001**	**< 0.001**		**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**
	N	352	349	352	352	352	352	351	258	257	257	257
	Correlation	0.167	0.138	0.222	1	0.357	0.267	0.348	0.209	0.273	0.356	0.315
DV5	Sig. (2-tailed)	**0.002**	**0.010**	**< 0.001**		**< 0.001**	**< 0.001**	**< 0.001**	**0.001**	**< 0.001**	**< 0.001**	**< 0.001**
	N	353	350	352	353	353	353	352	259	258	258	258
	Correlation	0.660	0.627	0.688	0.354	1	0.812	0.812	0.364	0.481	0.598	0.528
DV6	Sig. (2-tailed)	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**		**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**
	N	353	350	352	353	353	353	352	259	258	258	258
	Correlation	0.692	0.697	0.696	0.256	0.807	1	0.813	0.459	0.452	0.593	0.605
DV7	Sig. (2-tailed)	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**		**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**
	N	353	350	352	353	353	353	352	259	258	258	258
	Correlation	0.649	0.627	0.671	0.355	0.814	0.790	1	0.386	0.419	0.546	0.496
DV8	Sig. (2-tailed)	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**		**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**
	N	352	349	351	352	352	352	352	258	257	257	257
	Correlation	0.411	0.451	0.505	0.253	0.454	0.559	0.475	1	0.214	0.528	0.485
DV9	Sig. (2-tailed)	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**		**0.001**	**< 0.001**	**< 0.001**
	N	259	257	258	259	259	259	258	259	258	258	258
	Correlation	0.501	0.494	0.465	0.260	0.467	0.447	0.418	0.305	1	0.511	0.461
DV10	Sig. (2-tailed)	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**		**< 0.001**	**< 0.001**
	N	258	256	257	258	258	258	257	258	258	257	257
	Correlation	0.505	0.526	0.587	0.359	0.569	0.611	0.541	0.606	0.525	1	0.819
DV11	Sig. (2-tailed)	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**		**< 0.001**
	N	258	256	257	258	258	258	257	258	257	258	257
	Correlation	0.502	0.501	0.579	0.295	0.508	0.610	0.476	0.592	0.479	0.845	1
DV12	Sig. (2-tailed)	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	**< 0.001**	
	N	258	256	257	258	258	258	257	258	257	257	258

Pearson (Top-Right) and Spearman (Bottom-Left) Correlations

Legend:

	Correlation of 0.600 to 0.699
	Correlation of 0.700 to 0.799
	Correlation of 0.800+

Dependent Variables:

DV1	How credible do you find TWBC's disclosures about greenhouse gas emissions?
DV2	How confident are you that Tasty Water Beverage Company's 2014 Environmental Sustainability Report represents the true performance of the company with respect to greenhouse gas emissions?
DV4	How reliable do you find TWBC's representations made in the Company's 2014 Environmental Sustainability Report?
DV5	How attractive do you find TWBC as a potential investment opportunity?
DV6	I believe that TWBC's management team is credible.
DV7	I believe that TWBC's management team is forthcoming.
DV8	I believe that TWBC's management team is trustworthy.
DV9	I believe that TWBC's management team had their greenhouse gas emission results externally verified (i.e., assured by an independent accountant) to increase the credibility of the reported results.
DV10	Please indicate the level of verification (assurance) you perceive from the independent accountant's report provided on TWBC's 2014 Environmental Sustainability Report:
DV11	The independent accountant's verification (assurance) of greenhouse gas emissions increased the credibility of results reported by TWBC.
DV12	TWBC's results of greenhouse gas emissions are more believable because of the verification (assurance) provided by an independent accountant.

APPENDICES: EXPERIMENTAL INSTRUMENT

APPENDIX A
QUALIFYING QUESTION, INTRODUCTION, AND BACKGROUND INFORMATION

Please select "Yes" if you meet all of the following qualifications. If you do not meet one or more of the qualifications, please select "No."

Qualifications:

1. I am at least 18 years old
2. I currently reside in the United States
3. I have purchased stock within the past 12 months
4. I do not buy/sell/trade stock as part of my employment responsibilities

- Yes
- No

Introduction

Welcome!

The following case will ask you to answer questions about a hypothetical company's reporting on its environmental sustainability activities, specifically with regards to greenhouse gas emissions. You will be given background information for the company, excerpts from its environmental sustainability report, and then will be asked a series of questions about the items reviewed. There are no right or wrong answers; rather, you will be asked to provide your best judgments given the information provided.

This study should take approximately 40 minutes to complete and your participation is voluntary. All data are being collected in a manner that ensures your complete anonymity. All responses will only be analyzed in the aggregate.

I am a graduate student at Virginia Tech and this case study is part of my program of research for my graduate degree. In the following materials I examine individuals' impressions of verified environmental sustainability information. I realize that your time is very valuable and I appreciate your willingness to participate. If you have any questions or concerns about the study please contact me at SheldoMD@vt.edu or Professor Greg Jenkins, at greg.jenkins@vt.edu.

Thank you in advance for your valuable time!

Mark Sheldon
Department of Accounting and Information Systems
Pamplin College of Business
Virginia Tech

Background
As you may be aware, a number of companies, globally and in the United States, publicly report (i.e., make publicly available) the environmental impact of their business operations. Such reporting is part of a larger movement oftentimes referred to as sustainability reporting or Corporate Social Responsibility ("CSR") reporting. While companies in the United States are not required by law to report many details of their impact on the environment, this study concentrates on those companies that make this information available to the public.

Please take the next few minutes to review the company background information provided along with excerpts from its most recent environmental sustainability report.

The Tasty Water Beverage Company
The Tasty Water Beverage Company ("TWBC") is a producer and bottler of naturally flavored drinking waters. Since opening in 1990, TWBC has steadily grown and now serves a loyal customer base across the continental United States. You can find TWBC's flavored waters on the shelves of most convenience stores, gas stations, grocery stores and even large retailers.

For about 20 years the management team of TWBC has been tracking the impact of their business operations on the environment. For the past five years the company has posted an annual sustainability report on the company website detailing its findings. Many of the disclosures made by TWBC are in relation to the overall Food and Beverage Industry average, thus providing a benchmark of their performance.

TWBC's Vice President of Sustainability Activities oversees the compilation of the annual environmental sustainability report, and shares responsibility with a larger team of executives for key decisions made about the report. For example, this team decided to have components of the report verified (i.e., assured) by a large international accounting firm. In doing so, TWBC hired the accounting firm to provide a specified level of assurance (verification) on specific indicators included in the sustainability report.

The following are excerpts from TWBC's 2014 Environmental Sustainability Report.

The Tasty Water Beverage Company

Envioronmental Sustainability Report for the year ended December 31, 2014

APPENDIX B
TWBC SUSTAINABILITY REPORT EXCERPT: MANAGEMENT'S PRESENTATION AND DESCRIPTION OF GREENHOUSE GAS EMISSION PERFORMANCE (CONDITION: POSITIVE PERFORMANCE)

Below is page 12 from the *TWBC Environmental Sustainability Report*. This page was written by TWBC management.

Emissions

This section describes the Tasty Water Beverage Company's (TWBC) greenhouse gas emissions using reporting indicators defined by the Global Reporting Initiative (GRI). The GRI is an organization that provides a standardized sustainability reporting framework to be used by companies around the world in reporting the results of sustainability activities.

The following table summarizes our results for select GRI indicators and includes the overall average performance of the Food and Beverage Industry along with a factor showing how our performance differed from the industry average for each indicator. As shown, our results for 2014 were better than the industry average for all indicators.

GRI Indicator	Description	TWBC Results for 2014	Food and Beverage Industry Average for 2014	TWBC % Diff. from Industry Average
G4-EN15	Direct greenhouse gas emissions	41.0	102.9	- 60.2%
G4-EN16	Energy indirect greenhouse gas emissions	94.5	205.5	- 54.0%
G4-EN17	Other indirect greenhouse gas emissions	62.9	187.9	- 66.5%
G4-EN19	Reduction of greenhouse gas emissions	62.4%	1.3%	+ 61.1%
CO_2 (and equivalent) emissions in thousands of metric tons				

Direct greenhouse gas emissions are reported under the GRI Indicator G4-EN15, which includes "emissions from operations that are owned or controlled by" TWBC. During 2014, we directly emitted 41.0 metric tons (in thousands) of CO_2 (carbon dioxide) and CO_2 equivalents into the environment. The primary sources for these emissions included our bottling plants, processing plants and distribution trucks.

Energy indirect greenhouse gas emissions are reported under the GRI Indicator G4-EN16, which includes "emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by" TWBC. During 2014, we emitted 94.5 metric tons (in thousands) of energy indirect CO_2 and CO_2 equivalents into the environment. The primary sources for these emissions included our heating, cooling, and powering of bottling and processing plants.

Other indirect greenhouse gas emissions are reported under the GRI Indicator G4-EN17, which includes indirect emissions (not included in "energy indirect") that "occur outside of the organization, including both upstream and downstream emissions." During 2014, we emitted 62.9 metric tons (in thousands) of other indirect CO_2 and CO_2 equivalents into the environment. The primary sources for these emissions included our bottle producers, raw material (ingredients) providers, and from coolers at retail stores displaying our products.

Reductions of greenhouse gas emissions are reported under the GRI Indicator G4-EN19. This year we experienced a 62.4% reduction in total greenhouse gas emissions across our entire company (including direct, energy indirect, and other indirect emissions), as measured using baseline emissions established on December 31, 2013.

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APPENDIX C
TWBC SUSTAINABILITY REPORT EXCERPT: MANAGEMENT'S PRESENTATION AND DESCRIPTION OF GREENHOUSE GAS EMISSION PERFORMANCE (CONDITION: NEUTRAL PERFORMANCE)

Below is page 12 from the *TWBC Environmental Sustainability Report*. This page was written by TWBC management.

Emissions

This section describes the Tasty Water Beverage Company's (TWBC) greenhouse gas emissions using reporting indicators defined by the Global Reporting Initiative (GRI). The GRI is an organization that provides a standardized sustainability reporting framework to be used by companies around the world in reporting the results of sustainability activities.

The following table summarizes our results for select GRI indicators and includes the overall average performance of the Food and Beverage Industry along with a factor showing how our performance differed from the industry average for each indicator. As shown, our results for 2014 were approximately the same as the industry average for all indicators.

GRI Indicator	Description	TWBC Results for 2014	Food and Beverage Industry Average for 2014	TWBC % Diff. from Industry Average
G4-EN15	Direct greenhouse gas emissions	105.8	102.9	+ 2.8%
G4-EN16	Energy indirect greenhouse gas emissions	200.2	205.5	- 2.6%
G4-EN17	Other indirect greenhouse gas emissions	189.8	187.9	+ 1.0%
G4-EN19	Reduction of greenhouse gas emissions	0.8%	1.3%	- 0.5%
CO_2 (and equivalent) emissions in thousands of metric tons				

Direct greenhouse gas emissions are reported under the GRI Indicator G4-EN15, which includes "emissions from operations that are owned or controlled by" TWBC. During 2014, we directly emitted 105.8 metric tons (in thousands) of CO_2 (carbon dioxide) and CO_2 equivalents into the environment. The primary sources for these emissions included our bottling plants, processing plants and distribution trucks.

Energy indirect greenhouse gas emissions are reported under the GRI Indicator G4-EN16, which includes "emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by" TWBC. During 2014, we emitted 200.2 metric tons (in thousands) of energy indirect CO_2 and CO_2 equivalents into the environment. The primary sources for these emissions included our heating, cooling, and powering of bottling and processing plants.

Other indirect greenhouse gas emissions are reported under the GRI Indicator G4-EN17, which includes indirect emissions (not included in "energy indirect") that "occur outside of the organization, including both upstream and downstream emissions." During 2014, we emitted 189.8 metric tons (in thousands) of other indirect CO_2 and CO_2 equivalents into the environment. The primary sources for these emissions included our bottle producers, raw material (ingredients) providers, and from coolers at retail stores displaying our products.

Reductions of greenhouse gas emissions are reported under the GRI Indicator G4-EN19. This year we experienced a 0.8% reduction in total greenhouse gas emissions across our entire company (including direct, energy indirect, and other indirect emissions), as measured using baseline emissions established on December 31, 2013.

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APPENDIX D
TWBC SUSTAINABILITY REPORT EXCERPT: MANAGEMENT'S PRESENTATION AND DESCRIPTION OF GREENHOUSE GAS EMISSION PERFORMANCE (CONDITION: NEGATIVE PERFORMANCE)

Below is page 12 from the *TWBC Environmental Sustainability Report*. This page was written by TWBC management.

Emissions

This section describes the Tasty Water Beverage Company's (TWBC) greenhouse gas emissions using reporting indicators defined by the Global Reporting Initiative (GRI). The GRI is an organization that provides a standardized sustainability reporting framework to be used by companies around the world in reporting the results of sustainability activities.

The following table summarizes our results for select GRI indicators and includes the overall average performance of the Food and Beverage Industry along with a factor showing how our performance differed from the industry average for each indicator. As shown, our results for 2014 were worse than the industry average for all indicators.

GRI Indicator	Description	TWBC Results for 2014	Food and Beverage Industry Average for 2014	TWBC % Diff. from Industry Average
G4-EN15	Direct greenhouse gas emissions	164.8	102.9	+ 60.2%
G4-EN16	Energy indirect greenhouse gas emissions	316.5	205.5	+ 54.0%
G4-EN17	Other indirect greenhouse gas emissions	312.9	187.9	+ 66.5%
G4-EN19	Reduction (increase) of greenhouse gas emissions	(59.8%)	1.3%	- 61.1%
CO_2 (and equivalent) emissions in thousands of metric tons				

Direct greenhouse gas emissions are reported under the GRI Indicator G4-EN15, which includes "emissions from operations that are owned or controlled by" TWBC. During 2014, we directly emitted 164.8 metric tons (in thousands) of CO_2 (carbon dioxide) and CO_2 equivalents into the environment. The primary sources for these emissions included our bottling plants, processing plants and distribution trucks.

Energy indirect greenhouse gas emissions are reported under the GRI Indicator G4-EN16, which includes "emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by" TWBC. During 2014, we emitted 316.5 metric tons (in thousands) of energy indirect CO_2 and CO_2 equivalents into the environment. The primary sources for these emissions included our heating, cooling, and powering of bottling and processing plants.

Other indirect greenhouse gas emissions are reported under the GRI Indicator G4-EN17, which includes indirect emissions (not included in "energy indirect") that "occur outside of the organization, including both upstream and downstream emissions." During 2014, we emitted 312.9 metric tons (in thousands) of other indirect CO_2 and CO_2 equivalents into the environment. The primary sources for these emissions included our bottle producers, raw material (ingredients) providers, and from coolers at retail stores displaying our products.

Reductions (increases) of greenhouse gas emissions are reported under the GRI Indicator G4-EN19. This year we experienced a 59.8% increase in total greenhouse gas emissions across our entire company (including direct, energy indirect, and other indirect emissions), as measured using baseline emissions established on December 31, 2013.

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APPENDIX E
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: POSITIVE PERFORMANCE, REASONABLE ASSURANCE)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	41.0	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	94.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	62.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	62.4%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX F
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: POSITIVE PERFORMANCE, LIMITED ASSURANCE)

Independent Accountant's Review Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	41.0	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	94.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	62.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	62.4%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX G
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: POSITIVE PERFORMANCE, HYBRID ASSURANCE – REASONABLE THEN LIMITED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	41.0	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	94.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

We have also reviewed the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express a conclusion on the indicators included in Table 2 based on our review.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	62.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	62.4%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX H
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: POSITIVE PERFORMANCE, HYBRID ASSURANCE – REASONABLE THEN LIMITED, TABLES FLIPPED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	62.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	62.4%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

We have also reviewed the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express a conclusion on the indicators included in Table 2 based on our review.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	41.0	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	94.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX I
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: POSITIVE PERFORMANCE, HYBRID ASSURANCE – LIMITED THEN REASONABLE)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	41.0	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	94.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

We have also examined the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express an opinion on the indicators included in Table 2 based on our examination.

Table 2			
Description	**Measurement**	**2014 Results**	**Reporting Criteria**
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	62.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	62.4%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 2 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX J
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: POSITIVE PERFORMANCE, HYBRID ASSURANCE – LIMITED THEN REASONABLE, TABLES FLIPPED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	62.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	62.4%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

We have also examined the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express an opinion on the indicators included in Table 2 based on our examination.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	41.0	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	94.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 2 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX K
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEUTRAL PERFORMANCE, REASONABLE ASSURANCE)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	105.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	200.2	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	189.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	0.8%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX L
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEUTRAL PERFORMANCE, LIMITED ASSURANCE)

Independent Accountant's Review Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	105.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	200.2	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	189.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	0.8%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX M
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEUTRAL PERFORMANCE, HYBRID ASSURANCE – REASONABLE THEN LIMITED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	105.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	200.2	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

We have also reviewed the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express a conclusion on the indicators included in Table 2 based on our review.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	189.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	0.8%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX N
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEUTRAL PERFORMANCE, HYBRID ASSURANCE – REASONABLE THEN LIMITED, TABLES FLIPPED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	189.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	0.8%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

We have also reviewed the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express a conclusion on the indicators included in Table 2 based on our review.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	105.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	200.2	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX O
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEUTRAL PERFORMANCE, HYBRID ASSURANCE – LIMITED THEN REASONABLE)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	105.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	200.2	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

We have also examined the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express an opinion on the indicators included in Table 2 based on our examination.

Table 2			
Description	**Measurement**	**2014 Results**	**Reporting Criteria**
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	189.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	0.8%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 2 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX P
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEUTRAL PERFORMANCE, HYBRID ASSURANCE – LIMITED THEN REASONABLE, TABLES FLIPPED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	189.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	0.8%	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

We have also examined the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express an opinion on the indicators included in Table 2 based on our examination.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	105.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	200.2	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 2 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX Q
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEGATIVE PERFORMANCE, REASONABLE ASSURANCE)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	164.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	316.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	312.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction (increase) of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	(59.8%)	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX R
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEGATIVE PERFORMANCE, LIMITED ASSURANCE)

Independent Accountant's Review Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	164.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	316.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	312.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction (increase) of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	(59.8%)	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX S
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEGATIVE PERFORMANCE, HYBRID ASSURANCE – REASONABLE THEN LIMITED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	164.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	316.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

We have also reviewed the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express a conclusion on the indicators included in Table 2 based on our review.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	312.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction (increase) of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	(59.8%)	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX T
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEGATIVE PERFORMANCE, HYBRID ASSURANCE – REASONABLE THEN LIMITED, TABLES FLIPPED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have examined the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express an opinion on the indicators included in Table 1 based on our examination.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	312.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction (increase) of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	(59.8%)	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 1 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

We have also reviewed the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express a conclusion on the indicators included in Table 2 based on our review.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	164.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	316.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX U
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEGATIVE PERFORMANCE, HYBRID ASSURANCE – LIMITED THEN REASONABLE)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
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Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	316.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

We have also examined the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express an opinion on the indicators included in Table 2 based on our examination.

Table 2			
Description	**Measurement**	**2014 Results**	**Reporting Criteria**
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	312.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction (increase) of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	(59.8%)	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 2 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX V
TWBC SUSTAINABILITY REPORT EXCERPT: INDEPENDENT ACCOUNTANT'S REPORT (CONDITION: NEGATIVE PERFORMANCE, HYBRID ASSURANCE – LIMITED THEN REASONABLE, TABLES FLIPPED)

Independent Accountant's Report

Tasty Water Beverage Company Board of Directors and Management:

We have reviewed the following selected environmental data (the "selected indicators") included on page 12 of The Tasty Water Beverage Company's 2014 Environmental Sustainability Report (the "Report") for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 1 below. Our responsibility is to express a conclusion on the indicators included in Table 1 based on our review.

Table 1

Description	Measurement	2014 Results	Reporting Criteria
Other indirect greenhouse gas emissions (scope 3)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	312.9	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Reduction (increase) of greenhouse gas emissions	Percentage decrease in total greenhouse gas emissions from prior year	(59.8%)	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the selected indicators in order for each to be presented in accordance with the criteria identified above. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the selected indicators are presented in accordance with the criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

Based on our review, we are not aware of any material modifications that should be made to the selected indicators in Table 1 for the Tasty Water Beverage Company for the year ended December 31, 2014 in order for each indicator to be in accordance with the referenced reporting criteria.

We have also examined the following selected indicators included on page 12 of the Report for the year ended December 31, 2014. Tasty Water Beverage Company's management is responsible for the selected indicators, based on the reporting criteria referenced in Table 2 below. Our responsibility is to express an opinion on the indicators included in Table 2 based on our examination.

Table 2

Description	Measurement	2014 Results	Reporting Criteria
Direct greenhouse gas emissions (scope 1)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	164.8	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition
Energy indirect greenhouse gas emissions (scope 2)	Greenhouse gas emissions measured in metric tons of CO_2 equivalents	316.5	World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol – Revised Edition

Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the indicators in Table 2 are presented in accordance with the referenced criteria, in all material respects. An examination involves performing procedures to obtain evidence about the selected indicators. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the selected indicators, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

Environmental and energy use data are subject to measurement uncertainties resulting from limitations inherent in the nature and the methods used for determining such data. The selection of different but acceptable measurement techniques can result in materially different measurements. The precision of different measurement techniques may also vary.

In our opinion, the selected indicators presented in Table 2 for the Tasty Water Beverage Company for the year ended December 31, 2014 are presented in accordance with the referenced reporting criteria, in all material respects.

[redacted] (Large International Accounting Firm)
New York, New York
February 18, 2015

APPENDIX W
COMPREHENSION CHECK QUESTIONS

**The following were presented on the same screen as the independent accountant's report*

1. Who prepared the Independent Accountant's Report?
    - The Independent Accountant
    - Tasty Water Beverage Company

2. Did the Independent Accountant's Report relate to TWBC's financial statements or greenhouse gas emissions?
    - Financial statements
    - Greenhouse gas emissions

3. How many methods to verify (i.e., assure) TWBC's greenhouse gas emissions are described in the Independent Accountant's Report?
    - The Independent Accountant's Report describes one method used to verify (assure) all four greenhouse gas emission indicators.
    - The Independent Accountant's Report describes two methods used to verify (assure) the greenhouse gas emission indicators.

APPENDIX X
DEPENDENT VARIABLE AND MANIPULATION CHECK QUESTIONS

Based on the excerpts you just read from the Tasty Water Beverage Company's (TWBC) 2014 Environmental Sustainability Report, please answer the following questions:

1. How credible do you find TWBC's disclosures about greenhouse gas emissions?

Strongly Not Credible	Somewhat Not Credible	Slightly Not Credible		Slightly Credible	Somewhat Credible	Strongly Credible
-3	-2	-1	0	+1	+2	+3
o	o	o	o	o	o	o

2. How confident are you that Tasty Water Beverage Company's 2014 Environmental Sustainability Report represents the true performance of the company with respect to greenhouse gas emissions?

Strongly Not Confident	Somewhat Not Confident	Slightly Not Confident		Slightly Confident	Somewhat Confident	Strongly Confident
-3	-2	-1	0	+1	+2	+3
o	o	o	o	o	o	o

3. How did you perceive TWBC's performance in controlling greenhouse gas emissions as compared to the industry average?

Much Worse	Somewhat Worse	Slightly Worse	Neither Better nor Worse	Slightly Better	Somewhat Better	Much Better
-3	-2	-1	0	+1	+2	+3
o	o	o	o	o	o	o

4. How reliable do you find TWBC's representations made in the Company's 2014 Environmental Sustainability Report?

Strongly Not Reliable	Somewhat Not Reliable	Slightly Not Reliable		Slightly Reliable	Somewhat Reliable	Strongly Reliable
-3	-2	-1	0	+1	+2	+3
o	o	o	o	o	o	o

5. How attractive do you find TWBC as a potential investment opportunity?

Very Bad	Somewhat Bad	Slightly Bad		Slightly Good	Somewhat Good	Very Good
-3	-2	-1	0	+1	+2	+3
o	o	o	o	o	o	o

For the following questions, please indicate your level of agreement with each statement about TWBC's management team:

6. I believe that TWBC's management team is credible.

Strongly Disagree -3	Somewhat Disagree -2	Slightly Disagree -1	Neither Agree nor Disagree 0	Slightly Agree +1	Somewhat Agree +2	Strongly Agree +3
o	o	o	o	o	o	o

7. I believe that TWBC's management team is forthcoming.

Strongly Disagree -3	Somewhat Disagree -2	Slightly Disagree -1	Neither Agree nor Disagree 0	Slightly Agree +1	Somewhat Agree +2	Strongly Agree +3
o	o	o	o	o	o	o

8. I believe that TWBC's management team is trustworthy.

Strongly Disagree -3	Somewhat Disagree -2	Slightly Disagree -1	Neither Agree nor Disagree 0	Slightly Agree +1	Somewhat Agree +2	Strongly Agree +3
o	o	o	o	o	o	o

9. I believe that TWBC's management team had their greenhouse gas emission results externally verified (i.e., assured by an independent accountant) to increase the credibility of the reported results.

Strongly Disagree -3	Somewhat Disagree -2	Slightly Disagree -1	Neither Agree nor Disagree 0	Slightly Agree +1	Somewhat Agree +2	Strongly Agree +3
o	o	o	o	o	o	o

For the following questions, in considering the verification (i.e., assurance) provided by the independent accountant on TWBC's reported greenhouse gas emissions, please provide your responses using the listed options and scales:

10. As described in the Independent Accountant's Report, did the accountant provide the same verification (i.e., assurance) on all four greenhouse gas emission indicators?
    - o Yes, the accountant provided the same verification (i.e., assurance) on all four indicators.
    - o No, the accountant provided two distinct verifications (i.e., assurances): one verification on two of the indicators, then another verification on the other two indicators.

11. Please indicate the level of verification (assurance) you perceive from the independent accountant's report provided on TWBC's 2014 Environmental Sustainability Report:

Zero Verification (Assurance)			Medium Verification (Assurance)			Absolute Verification (Assurance)
0	1	2	3	4	5	6
o	o	o	o	o	o	o

12. The independent accountant's verification (assurance) of greenhouse gas emissions increased the credibility of results reported by TWBC.

Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
-3	-2	-1	0	+1	+2	+3
o	o	o	o	o	o	o

13. TWBC's results of greenhouse gas emissions are more believable because of the verification (assurance) provided by an independent accountant.

Strongly Disagree	Somewhat Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
-3	-2	-1	0	+1	+2	+3
o	o	o	o	o	o	o

14. Please rank the following industries in the order (1 = most likely, 5 = least likely) that you would expect firms in each industry to provide environmental sustainability reports. To rank, click and drag (up or down) the industry to the desired spot.
    - o Trade & Retail
    - o Food & Beverage
    - o Mining
    - o Pharmaceuticals
    - o Automotive

For the following questions, please provide your responses based on the below scales and free-response fields:

15. Companies should be held responsible for any harm to the environment resulting from operations under their immediate control.

Strongly Disagree -3	Somewhat Disagree -2	Slightly Disagree -1	Neither Agree nor Disagree 0	Slightly Agree +1	Somewhat Agree +2	Strongly Agree +3
o	o	o	o	o	o	o

16. Companies should be held responsible for any harm to the environment resulting from the operations of their suppliers, vendors and utility providers.

Strongly Disagree -3	Somewhat Disagree -2	Slightly Disagree -1	Neither Agree nor Disagree 0	Slightly Agree +1	Somewhat Agree +2	Strongly Agree +3
o	o	o	o	o	o	o

17. When a company voluntarily reports on its environmental sustainability performance, I expect the company will focus on providing:

Only Indicators of Negative Performance 0	Indicators of both Positive and Negative Performance, but more Negative Indicators 1	Indicators of both Positive and Negative Performance (equal numbers of both) 2	Indicators of both Positive and Negative Performance, but more Positive Indicators 3	Only Indicators of Positive Performance 4
o	o	o	o	o

18. Please elaborate on your response to the previous question by describing why you expect a company would voluntarily report such indicators in an environmental sustainability report.

APPENDIX Y
ENVIRONMENTAL QUESTIONS

Listed below are statements about the relationship between humans and the environment. Please indicate your level of agreement with each statement.

1. We are approaching the limit of the number of people the Earth can support.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

2. Humans have the right to modify the natural environment to suit their needs.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

3. When humans interfere with nature it often produces disastrous consequences.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

4. Human ingenuity will insure that we do not make the Earth unlivable.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

5. Humans are seriously abusing the environment.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

6. The Earth has plenty of natural resources if we just learn how to develop them.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

7. Plants and animals have as much right as humans to exist.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

8. The balance of nature is strong enough to cope with the impacts of modern industrial nations.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

9. Despite our special abilities, humans are still subject to the laws of nature.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

10. The so-called “ecological crisis” facing humankind has been greatly exaggerated.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

11. The Earth is like a spaceship with very limited room and resources.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

12. Humans were meant to rule over the rest of nature.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

13. The balance of nature is very delicate and easily upset.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

14. Humans will eventually learn enough about how nature works to be able to control it.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

15. If things continue on their present course, we will soon experience a major ecological catastrophe.

Strongly Disagree	Mildly Disagree	Unsure	Mildly Agree	Strongly Agree
o	o	o	o	o

APPENDIX Z
DEMOGRAPHIC QUESTIONS

1. What is your gender?
    - Male
    - Female

2. How old are you?
    - Under 18
    - 18-25
    - 26-34
    - 35-54
    - 55-64
    - 65 or over

3. What is the highest level of education you have completed?
    - Less than High School (0-8 years)
    - Some High School (9-12 years, but did not graduate)
    - GED or High School Equivalency
    - High School Graduate
    - Attended a Vocational or Trade School after High School
    - Some College (no degree)
    - 2-year College Degree (Associate's Degree)
    - 4-year College Degree (BS, BA, or similar)
    - Some postgraduate (no degree)
    - Postgraduate (MS, MA, PhD, MD, etc.)

    Conditional on "Some College", "2-year College", or "4-year College":
        What is or was your major in college? [***Fill-in-the-blank box provided***]

    Conditional on "Some postgraduate" or "Postgraduate":
        What was your undergraduate major? [***Fill-in-the-blank box provided***]
        What is or was your graduate major? [***Fill-in-the-blank box provided***]

    Conditional on "Some College" or higher levels of education selected:
        Approximately how many of the following courses have you completed?
            Accounting:
                - None
                - 1-3
                - 4-10
                - 10+

Auditing:
- None
- 1-3
- 4-10
- 10+

Finance:
- None
- 1-3
- 4-10
- 10+

Statistics:
- None
- 1-3
- 4-10
- 10+

Other specialized mathematics (for example, calculus):
- None
- 1-3
- 4-10
- 10+

4. How old were you when you first learned to speak English?
   - Less than 5 years old
   - 5-10 years old
   - 11-15 years old
   - 16-20 years old
   - 21 years or older

5. What were you doing last week? (Please choose all that apply.)
   - Working a full-time job for pay or profit, that is, 35 hours or more?
   - Working for pay or profit part-time, that is, 1-34 hours?
   - Working two or more part-time jobs for pay, totaling 35 hours or more?
   - Unemployed, laid off, or looking for work?
   - With a job but not at work because of temporary illness, vacation, or work stoppage?
   - With a job but on family leave (maternity or paternity leave)?
   - In school?
   - Keeping house?
   - Doing volunteer work?
   - Other (please specify)

6. For what kind of business or industry do you or did you work? Choose one from the list below that best matches the job you consider to be your primary employment.
    - Construction and Extraction
    - Farming, Fishing, and Forestry
    - Installation, Maintenance, and Repair
    - Office and Administrative Support
    - Management, Business, and Financial
    - Production
    - Professional and Related
    - Sales and Related
    - Service
    - Transportation and Material Moving
    - Other (please specify)

7. Are you now, or have you ever been, a Certified Public Accountant (CPA)?
    - Yes
    - No

8. Please select the statement that best describes your familiarity with environmental sustainability reports:
    - Today is the first time I have heard of an environmental sustainability report
    - Prior to participating in this study, I have simply heard of environmental sustainability reports
    - I have previous knowledge of environmental sustainability reports and am generally familiar with the contents of such reports
    - I am very familiar with environmental sustainability reports

9. Do you have experience working with environmental sustainability related matters?
    - Yes
    - No

10. Have you ever read and interpreted the results of an environmental sustainability report in a professional role?
    - Yes
    - No

11. If you answered "Yes" to the question above, please describe how you used this information in your professional role.

12. Have you ever read and interpreted the results of an environmental sustainability report when making an investment decision?
    - Yes
    - No

13. If you answered "Yes" to the question above, please describe how you used this information in making your investment decision.

14. Do you have professional experience planning an audit, performing an audit or reviewing the results of an audit? Please select all that apply:
    - o Yes, I have professional experience planning audits
    - o Yes, I have professional experience performing audits
    - o Yes, I have professional experience reviewing the results of audits
    - o No, I do not have any of the above experiences

15. Please use the following scale to rate your knowledge of assurance provided by auditors:

I have no knowledge about verification (assurance) provided by auditors		I have moderate knowledge about verification (assurance) provided by auditors		I have high knowledge about verification (assurance) provided by auditors
0	1	2	3	4
o	o	o	o	o

16. Did you complete this case study in one sitting without interruption?
    - o Yes
    - o No

APPENDIX AA
EXPERIMENTAL MATERIALS FOR THE NO ASSURANCE CONDITION

For the No Assurance condition, the same experimental materials provided in Appendix A were used, with the following exceptions:

1. The Introduction specified that the task would take 20 minutes and "verified environmental sustainability information" was shortened to "environmental sustainability information" so there would be no references to verification.

2. The following sentence was removed from the Background section:

   "For example, this team decided to have components of the report verified (i.e., assured) by a large international accounting firm. In doing so, TWBC hired the accounting firm to provide a specified level of assurance (verification) on specific indicators included in the sustainability report."

3. All independent accountant's reports, and accompanying comprehension check questions (listed below), were removed:

   Who prepared the Independent Accountant's Report?
   - *The Independent Accountant*
   - *Tasty Water Beverage Company*

   Did the Independent Accountant's Report relate to TWBC's financial statements or greenhouse gas emissions?
   - *Financial statements*
   - *Greenhouse gas emissions*

   How many methods to verify (i.e., assure) TWBC's greenhouse gas emissions are described in the Independent Accountant's Report?
   - *The Independent Accountant's Report describes one method used to verify (assure) all four greenhouse gas emission indicators.*
   - *The Independent Accountant's Report describes two methods used to verify (assure) the greenhouse gas emission indicators.*

4. The following questions were **<u>removed</u>** as they reference assurance provided in the experiment:

I believe that TWBC's management team had their greenhouse gas emission results externally verified (i.e., assured by an independent accountant) to increase the credibility of the reported results.

Strongly Disagree	*Somewhat Disagree*	*Slightly Disagree*	*Neither Agree nor Disagree*	*Slightly Agree*	*Somewhat Agree*	*Strongly Agree*
-3	*-2*	*-1*	*0*	*+1*	*+2*	*+3*
o	o	o	o	o	o	o

For the following questions, in considering the verification (i.e., assurance) provided by the independent accountant on TWBC's reported greenhouse gas emissions, please provide your responses using the listed options and scales:

As described in the Independent Accountant's Report, did the accountant provide the same verification (i.e., assurance) on all four greenhouse gas emission indicators?

- o *Yes, the accountant provided the same verification (i.e., assurance) on all four indicators.*
- o *No, the accountant provided two distinct verifications (i.e., assurances): one verification on two of the indicators, then another verification on the other two indicators.*

Please indicate the level of verification (assurance) you perceive from the independent accountant's report provided on TWBC's 2014 Environmental Sustainability Report:

Zero Verification (Assurance)			*Medium Verification (Assurance)*			*Absolute Verification (Assurance)*
0	*1*	*2*	*3*	*4*	*5*	*6*
o	o	o	o	o	o	o

The independent accountant's verification (assurance) of greenhouse gas emissions increased the credibility of results reported by TWBC.

Strongly Disagree	*Somewhat Disagree*	*Slightly Disagree*	*Neither Agree nor Disagree*	*Slightly Agree*	*Somewhat Agree*	*Strongly Agree*
-3	*-2*	*-1*	*0*	*+1*	*+2*	*+3*
o	o	o	o	o	o	o

TWBC's results of greenhouse gas emissions are more believable because of the verification (assurance) provided by an independent accountant.

Strongly Disagree	*Somewhat Disagree*	*Slightly Disagree*	*Neither Agree nor Disagree*	*Slightly Agree*	*Somewhat Agree*	*Strongly Agree*
-3	*-2*	*-1*	*0*	*+1*	*+2*	*+3*
o	o	o	o	o	o	o

5. The following question was **added** after Dependent Variable Question #5:

Please indicate the extent to which TWBC's greenhouse gas emission indicators were verified (i.e., assured).

No Verification (Assurance)			*No Verification (Assurance)*			*No Verification (Assurance)*
0	*1*	*2*	*3*	*4*	*5*	*6*
o	o	o	o	o	o	o

6. The following questions were **added** after Dependent Variables Question #8:

Please respond to the following questions or indicate your level of agreement with the provided statement:

TWBC's results of greenhouse gas emissions would be more believable if verified (i.e., assured) by an third party accountant.

Strongly Disagree	*Somewhat Disagree*	*Slightly Disagree*	*Neither Agree nor Disagree*	*Slightly Agree*	*Somewhat Agree*	*Strongly Agree*
-3	*-2*	*-1*	*0*	*+1*	*+2*	*+3*
o	o	o	o	o	o	o

Would you expect TWBC to have their greenhouse gas emission information verified (i.e., assured) by a third party?

- o *Yes*
- o *No*

What third party, if any, would you expect TWBC to hire to verify (i.e., assure) the greenhouse gas emission they shared with you?

- *Accountant / Auditor*
- *Environmental Consultant*
- *I would expect the following third party to be hired by TWBC to verify (assure) their greenhouse gas emission information:_____*
- *I would not expect TWBC to hire anyone to verify (assure) their greenhouse gas emission information*

Participant demographic information was also collected using the same questions found in Appendix Z.

APPENDIX AB
EXPERIMENTAL MATERIALS FOR LIMITED AND REASONABLE ASSURANCE STATEMENTS

Problem Context

Assume you just received a company's report on their environmental impact for the year beginning January 1, 2014 and ending December 31, 2014. The report included information from the company detailing its greenhouse gas emissions for the year, including the total quantity of emissions for each type of greenhouse gas (i.e., carbon dioxide, methane, and nitrous oxide). There is also a footnote from the company that explains the greenhouse gases were measured and reported using standardized criteria, specifically *MDS Criteria*.

Near the end of the report you find the company had the information included in the report verified (assured) by an independent accountant. The accountant provided a written statement in the report as follows:

Limited Assurance

Scope Paragraph
Our review was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the review to obtain limited assurance about whether any material modifications should be made to the presented greenhouse gas emissions in order for each to be presented in accordance with MDS Criteria. A review is substantially less in scope than an examination, the objective of which is to obtain reasonable assurance about whether the greenhouse gas emissions are presented in accordance with MDS Criteria, in all material respects, in order to express an opinion. Accordingly, we do not express such an opinion. We believe that our review provides a reasonable basis for our conclusion.

Conclusion
Based on our review, we are not aware of any material modifications that should be made to the presented greenhouse gas emissions for the company for the year ended December 31, 2014 in order for each emission to be presented in accordance with MDS Criteria.

Reasonable Assurance

Scope Paragraph
Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether the greenhouse gas emissions are presented in accordance with MDS Criteria, in all material respects. An examination involves performing procedures to obtain evidence about the greenhouse gas emissions. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the greenhouse gas emissions, whether due to fraud or error. We believe that the evidence we obtained is sufficient and

appropriate to provide a reasonable basis for our opinion.

Opinion
In our opinion, the presented greenhouse gas emissions for the company for the year ended December 31, 2014 are presented in accordance with MDS Criteria, in all material respects.

Questions:

1. Considering the statement provided by the independent accountant, how reliable would you find the company's reported greenhouse gas emissions?

Absolutely Not Reliable		Moderately Not Reliable		Neutral		Moderately Reliable		Absolutely Reliable
-4	-3	-2	-1	0	+1	+2	+3	+4
o	o	o	o	o	o	o	o	o

2. Based on the statement provided by the independent accountant, to what extent have the company's greenhouse gas emissions been assured (verified) by the independent accountant?

Not Assured (Verified)		Slightly Assured (Verified)		Moderately Assured (Verified)		Strongly Assured (Verified)		Absolutely Assured (Verified)
0	1	2	3	4	5	6	7	8
o	o	o	o	o	o	o	o	o

Participant demographic information was also collected using the same questions found in Appendix Z.