**The Effects of CSR Reporting Frameworks and Financial Conditions on Managers' Willingness to Invest in CSR**

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## Abstract

Previous studies on Corporate Social Responsibility (CSR) have focused on the impacts of CSR disclosure on the decision making of external users of CSR information. This study contributes to the literature through its focus on how CSR disclosure impacts on the decision making of internal users of this information. Specifically, we investigated the impacts of CSR reporting frameworks and companies' financial conditions on managers' willingness to invest in a CSR project. Our findings supported our hypothesis that managers are significantly more willing to invest in a CSR project when their companies can disclose their CSR activities using a standalone CSR reporting framework. We also found that an integrated reporting framework did not incrementally affect managers' willingness to invest in a CSR project relative to the financial statement disclosure framework. Moreover, we found that companies' financial conditions did not affect the likelihood of managers investing in a CSR project. Our findings extend legitimacy theory by suggesting that the means of legitimation, via standalone reporting frameworks, have varying impacts on managers' behavior. This study contributes to the literature on the impacts of various reporting mechanisms on internal decision making.



Keywords: Corporate social responsibility, integrated reporting, internal CSR information users, investment in CSR projects.

## I. INTRODUCTION

The accounting and finance literature supports the argument that companies will invest in corporate social responsibility (CSR) activities when such investments increase shareholder value (Shank, Manullang, and Hill 2005, Dhaliwal, Li, Tsang, and Yang 2011). While a number of studies suggest that CSR investments negatively impact on financial performance, many other studies have found a positive association between CSR investment and financial performance (Margolis and Walsh 2003, Orlitzky, Schmidt, and Rynes 2003). Moreover, studies have found that managers could, in many cases, have earned higher returns if available resources had been allocated to investment areas other than CSR (Moser and Martin 2012). Based on their use of traditional financial logic and their consideration of shareholders' interest in profit maximization, managers may be unwilling to invest in costly CSR activities as such investments could decrease their firms' financial resources and consequently their value (Mackey, Mackey, and Barney 2007).

Stakeholders' social and environmental concerns are resulting in mounting pressure on companies to adopt a systematic approach in reporting their CSR activities and investments. In recent years, CSR reporting has increased dramatically in response to stakeholders' demands for transparency. For example, in 2013, a study by the Investor Responsibility Research Institute found that all Standard & Poor's (S&P) 500 companies provided some sort of CSR disclosure in their financial filings.[1] Moreover, almost all of the Global Fortune 250 firms issued voluntary, standalone CSR reports in 2013, compared with only 39% in 1999 (KPMG 2013). Given

[1] Investor Responsibility Research Institute and Sustainable Investments Institute (2013). Integrated Financial and Sustainability Reporting in the United States, available at http://irrcinstitute.org/pdf/FINAL_Integrated_Financial_Sustain_Reporting_April_2013.pdf.

increased reporting, a growing number of studies have investigated the impacts of CSR disclosure on the behavior and decision making of external users of CSR information. The impacts of CSR disclosure on external users include: reduced capital costs (Dhaliwal et al. 2011), increased interest and positive responses of potential investors (Martin and Moser 2016), more accurate analytical forecasts (Dhaliwal, Radhakrishnan, Tsang, and Yang 2012), improved access to finance (Cheng, Ioannou, and Serafeim 2014), enhanced environmental reputations (Hasseldine, Salama, and Toms 2005), value creation in case of negative events (Godfrey, Merrill, and Hansen 2009), positive influences on brands (Olsen, Slotegraaf, and Chandukala 2014), more optimistic recommendations for firms based on investment analyses (Ioannou and Serafeim 2012), and improved capabilities of companies (Aguinis and Glavas 2012) .

However, it is equally important to identify how CSR disclosure impacts internal users' decision making. Recently, there have been calls for research that examines how CSR reporting interacts with its integration within internal decision making (Searcy 2012, Battaglia, Bianchi, Frey, and Passetti 2015, Martin and Moser 2016). Studies have examined CSR implementation in relation to corporate strategies and decision making (Gond, Grubnic, Herzig, and Moon 2012) and the development of reporting guidelines (Cheng, Green, Conradie, Konishi, and Romi 2014) in response to stakeholders' influence (Rodrigue, Magnan, and Boulianne 2013). However, these studies have fallen short of investigating the extent of the impact of various reporting guidelines and frameworks on decision making relating to CSR implementation. Considering various CSR reporting frameworks, including financial statements, standalone sustainability reports, and integrated reporting, we extend the scope of the existing CSR literature by assessing the influence of various frameworks and companies' financial conditions on managers' willingness to invest in CSR. Moser and Martin (2012) have contended that despite a significant amount of research on CSR, we do not yet fully understand managers' incentives or motivations relating to CSR investment. Martin and Moser (2016) have found that the impact of CSR disclosure on managers' CSR investments varies according to the content. Extending this study, we argue that managers' willingness to invest in CSR activities is influenced not only by CSR disclosure content, but also by CSR disclosure frameworks. We hypothesized that managers who could disclose their CSR activities in a standalone CSR report would be more willing to invest in a CSR project than those who only reported their CSR activities in their financial statement (FS). We also hypothesized that the Integrated Reporting (IR) framework would not incrementally affect managers' willingness to invest in a CSR project because of their unfamiliarity with complex IR requirements. A third hypothesis was that companies evidencing superior financial performance would be more willing to invest in a CSR project, because they had more financial flexibility compared with that of unprofitable companies.

Overall, we found that managers who disclosed their CSR activities in a standalone CSR report were significantly more willing to invest in a CSR project compared with those who disclosed their activities within an FS. A second finding was that the IR framework did not have any incremental effect on managers' willingness to invest in a CSR project relative to the FS framework. Lastly, we found that companies' financial conditions did not have any significant effect on the likelihood of managers investing in a CSR project.

Our study contributes to the accounting literature in three ways. First, unlike previous studies that have examined the impact of CSR information on external users of accounting information, we focused our investigation on internal users of this information. We demonstrate that CSR disclosure frameworks had a significant impact on managers' willingness to invest in CSR activities. As such, our study sheds important light on the influence of CSR disclosure frameworks on managerial behavior. Second, the results of our study suggest that despite the conceptual appeal of the IR framework, it does not impact incrementally on managers' motivation to invest in CSR activities. Our study, therefore, reiterates the importance of refining and simplifying the IR framework, making concerted efforts to communicate this framework to managers, and familiarizing them with IR guidelines and requirements. Finally, our study opens up opportunities for future research that investigates the effects of CSR reporting frameworks on other managerial decisions such as performance evaluation and compensation systems.

The remainder of the paper is organized into the following four sections. Section II presents a theoretical background as the basis for hypothesis development. Section III describes the research design and the experimental procedures employed in this study. Section IV presents the results of the statistical analyses. Section V presents our conclusions and suggests future research directions.

## II. BACKGROUND AND HYPOTHESES

The accounting and finance literature has shown that companies invest in CSR when such investments increase shareholder value. However, in many instances, managers are faced with the possibility of earning higher returns for their investments by allocating resources to non-CSR investments. Hence, it is crucial to gain insights into how managers can be motivated to invest in CSR and what constitutes appropriate incentives for these investments.

The existing literature demonstrates that corporate commitments to invest in CSR primarily stem from two different logics: accumulating valuable resources and capabilities that lead to superior firm performance (Barney 1991, Clarkson, Li, Richardson, and Vasvari 2011) and seeking social approval (Meyer and Rowan 1977). Previous studies have investigated the influence of various factors such as organizational slack, mimicry, media attention, and international experience indicating the likelihood of firms investing in CSR (e.g. Bansal 2005, Bourgeois 1981, Russo and Fouts 1997). However, the results of these studies are inconclusive. Consequently, our understanding of how firms invest in CSR remains weak (Moser and Martin 2012).

A great deal of CSR research in the accounting field has focused on the use of CSR disclosure as a response to a legitimacy-threatening event (Deegan 2006). For example, Patten (1992) found that the number of annual environmental disclosures among petroleum companies increased significantly in response to the Exxon Valdez oil spill. However, explanations based on disclosure alone can lead to different interpretations. For example, one interpretation is that an organization's strategy and planning process may be a legitimate response to the needs of key stakeholder groups (Parker 2005). Thus, the organization's reporting would accurately reflect its activities. By contrast, another interpretation suggests that an organization may use disclosures to convince stakeholders that corporate change is occurring when, in reality, this is not the case (Deegan, Rankin, and Tobin 2002, Hooghiemstra 2000). Both viewpoints are supported by previous studies. Inconclusive results have also been reported in the literature regarding the impact of CSR activities on firms' performance. Some studies, using legitimacy theory (e.g. Patten 2002), found a significant negative association between CSR disclosure and performance. However, more recent studies (e.g. Clarkson, Li, Richardson, and Vasvari 2008) have found a significant positive relationship between CSR disclosure and performance. While many studies have investigated the association between CSR performance and disclosure, identification of the impacts of such disclosures on internal decision making remains a gap in the literature.

Consequently, there have been several calls for more research in this area (Gond et al. 2012, Adams and Frost 2008, Martin and Moser 2016).

According to legitimacy theory, to survive and succeed, a company's operations should be perceived as complying with the terms and requirements of the social contract. The social contract includes legal and non-legislated societal expectations (Deegan and Rankin 1996). Dowling and Pfeffer (1975) argued that companies took various actions (e.g., developing trust and cooperation) to ensure that their operations were perceived as legitimate. Trust helps to convince shareholders that opportunism (inappropriate use of a firm's assets) and moral hazard (shirking or lack of effort) do not prevail among managers (Jones 1995, p. 423). However, these characteristics must be operationalized or reflected in an organization's actions. An organization chooses such actions while considering the legitimacy of, and their ability to have an impact on, various stakeholder groups' claims. This is because an organization's survival is threatened when stakeholders do not believe in its legitimacy (Sonpar, Pazzaglia, and Kornijenko 2010). Under pressures relating to their legitimacy, organizations may either adopt a passive strategy of complying with external pressures or a proactive strategy of managing external pressures (Beddewela and Fairbrass 2015).

Drawing on legitimacy theory, accounting scholars have argued that CSR disclosure is adopted by organizations as a strategy in response to external pressures to implement corporate social actions. This line of research suggests that managers use CSR disclosures opportunistically, that is, to manage stakeholders' impressions (Merkl-Davies and Brennan 2007). For instance, Neu, Warsame, and Pedwell (1998) found evidence of impression management, arguing that environmental disclosure in annual reports was aimed at altering the opinions of influential stakeholders regarding CSR performance. However, more recent research has shown that CSR disclosure does in fact have positive impacts on managers' decision making relating to CSR (Martin and Moser 2016).

**CSR Stand-Alone Reports**

The number of companies that voluntarily issue standalone CSR reports has increased considerably over the last two decades despite complaints that this reporting type is costly (Mahoney, Thorne, Cecil, and LaGore 2013). In 2013, almost all of the Global Fortune 250 firms issued voluntary standalone CSR reports compared with only 39% of such firms in 1999 (KPMG 2013). Mahoney et al. (2013) have argued that firms use standalone CSR reports to inform stakeholders of their commitment to CSR. From the legitimacy theory perspective, the recent increase in the use of standalone CSR reporting indicates that companies are responding to societal pressure on them to be socially responsible.

Dhaliwal et al. (2012) have suggested that companies need to adopt a broader perspective on CSR activities by considering the interests of important stakeholders other than investors and creditors such as customers, regulators, employees, and society at large. Although the main users of accounting standards and corporation acts are investors and creditors, all organizations have other stakeholders with a direct or indirect interest in them. Gaa (2009) has argued that managers use discretion to make voluntary disclosures that respond to these wider stakeholders. For example, managers who invest in CSR activities are able to disclose these activities in standalone CSR reports. Legitimacy theory predicts that disclosure of CSR activities in standalone reports enhances a company's legitimacy.

When managers disclose their CSR activities in their annual reports, they can usually only provide limited financial information about their investments in CSR projects. Because

CSR projects are often less profitable compared with other investment opportunities, they could be perceived by users of this information as a hindrance to optimal financial performance. Therefore, annual reports provide limited opportunities for managers to elaborate on investments made in less profitable CSR projects compared with non-CSR investments. When managers prepare both an annual FS and a standalone CSR report, they are able to mitigate the effects of the less profitable CSR project through project disclosure included in the standalone CSR report. Managers can also use a standalone CSR report to focus more on the positive social and environmental impacts of their investment decisions rather than simply providing operational cost and revenue data. Disclosures that focus more on social benefits have been found to have a more significant influence on internal decision making (Moser and Martin 2012). Managers who use a CSR standalone reporting framework are more willing to invest in a CSR project than those using an FS framework. Specifically, we tested the following hypothesis:

*H1*: *Managers who use a standalone CSR reporting framework will be more willing to invest in a CSR project compared with those who use an FS reporting framework.*

**Integrated Reporting**

IR entails concise communication on how, in the context of its external environment, an organization's strategy, governance, performance, and prospects lead to value creation in the short, medium, and long term (IIRC 2013). IR enables a company to demonstrate its responsibility toward the global economy and toward three major stakeholders: its shareholders, society, and the environment (IRCSA 2011). IR reveals inter-relationships among governance and financial, intellectual, social, and environmental capital. When managers prepare an integrated report, they are able to show that a decrease in their companies' financial resources is compensated for by an increase in other resources such as intellectual capital and reputation.

Therefore, while investment in a CSR activity may decrease a company's profit (financial capital), it could also increase the company's environmental contribution, for example, by reducing the emission levels from the production facility (environmental capital). Moreover, employees' motivation could be increased, given their knowledge that they work for a company that cares about the environment (human capital). Martin and Moser (2016) found that disclosure that focuses more on the investment costs has less impact on internal decision making than disclosure that focuses on societal benefit. Compared with standalone CSR reporting, the IR framework requires companies to disclose the cost of investment (i.e., reduction in financial capital) as well as societal benefits.

Despite its conceptual appeal, IR is not yet well developed and it is rarely used in practice. Furthermore, IR tends to be cumbersome and deviates significantly from existing accounting frameworks. A survey of CSR reporting practices conducted by PWC (2013)[二] revealed that while 499 of the S&P 500 companies provided sustainability disclosures, only seven used the IR framework to report their CSR activities.

Cohen (2012) has argued that the IR framework is still far from being suitable for adoption as a mainstream reporting system. Specifically, if the IR framework is to be used as a tool by investors, then the IIRC needs to better facilitate companies' acquisition of a better understanding of how to measure and report the impacts of CSR performance in IR (Cohen 2012). In September 2011, the IIRC issued a discussion paper entitled "Towards Integrated Reporting: Communicating Value in the 21st Century." Subsequently, in May 2012, it issued a report entitled "Summary of Responses to the September 2011 Discussion Paper and Next Step."

[二] http://www.pwc.com/us/en/corporate-governance/publications/boardroom-direct-newsletter/june-2013-issues-in-focus.jhtml

Some excerpts from the latter report, articulating companies' concerns about the IR framework, are presented below:

> Today, Sustainability Reporting is far from [being in the] mainstream and [its] quality and integrity… is patchy. It is hard to see how companies will make the leap to Integrated Reporting without first understanding their sustainability impacts in detail and knowing how to measure them. There is a danger that Integrated Reporting will be seen as an 'easy option' to minimize evaluation and accountability for sustainability impacts because in a materiality analysis, financial considerations will always come first (page 1).
>
> Integrated Reporting will necessarily be driven by financial interests and will overlook highly qualitative impacts which cannot be easily monetized. Not everything needs to be integrated. It is possible to have a discreet environmental strategy without this affecting the core business offering - it will make it more environmentally responsible but may not of necessity require overriding changes in strategic business direction. Therefore, the drive to Integrated Reporting must be flexible enough to allow companies to present sustainability impacts in a way which is separate from core financials (page 1).
>
> Comparability will continue to be elusive, reducing red tape and increasing market stability are way beyond the scope of what we can expect integrated reporting to achieve. I think the IIRC framework should come down out of the clouds and be more realistic about what contribution IR will actually make within the framework of the next 20 years. Painting such a 'universal solution to everything' makes the IR promise rather like a rosy fantasy. Better to have more modest objectives through the examination of what REALLY will change (page 4).

The above quotes clearly indicate that most companies do not have a clear understanding of how to measure and report CSR performance impacts using the IR framework. Because of the confusion stemming from the current IR framework, most companies are not motivated or ready to adopt this framework. Therefore, as IR currently stands, we predict that disclosure of CSR activities using IR will not have a significant impact on managers' willingness to invest in a CSR project. Specifically, we will test the following hypothesis:

*H2: There will be no difference in managers' willingness to invest in a CSR project relating to their use of an IR reporting framework or a financial reporting framework.*

**Financial Condition**

In contrast to legitimacy theory, which investigates external pressures on organizations such as stakeholder influences, a resource-based view (RBV) entails an investigation of internal resources that are conducive to CSR activities (Adams 2002, 2004, Delmas and Toffel 2004, Cormier, Magnan, and Van Velthoven 2005). Adopting a natural resource-based view (NRBV) of a firm, Hart (1995a) investigated the reasons why organizations employ different strategies relating to the environment. He suggested that strategy implementation is grounded in an organization's ability to acquire or develop resources and capabilities at various stages. The concept of a firm's NRBV (Hart 1995a, Penrose 1995, Hart 1995b) is an extension of the RBV (Barney 1991, Grant 1991, Teece 1984, Wernerfelt 1984). The RBV suggests that organizational capabilities are developed internally to maintain a competitive advantage. Both views suggest that internal resources are used to develop core competencies from primarily intangible, firm-specific capabilities. Core competencies, in turn, provide an organization with the means to fit within its external operating context. Extending this line of research through a longitudinal study, Bansal (2005) found that including both resource-based and external factors contributed to an understanding of corporations' implementation of CSR activities. While external factors and pressures play an initiating role in motivating corporate behavior toward social/environmental performance, internal resources are becoming increasingly important for maintaining and expanding these activities (Bansal 2005).

Applying the RBV, Clarkson et al. (2011) have argued that companies with greater financial resources and superior financial performance are more likely to pursue proactive environmental strategies. In line with this view, we propose the following hypothesis:

*H3: Managers in profitable companies will be more willing to invest in a CSR project than those in unprofitable companies.*

## III. EXPERIMENTAL DESIGN AND TASK DESCRIPTION

### Experimental Task and Procedure[三]

We used a 3 (CSR reporting frameworks) × 2 (financial conditions) between-subject design to test our hypotheses. Participants were randomly assigned to one of six groups constituted by reporting frameworks (financial reporting, financial reporting and standalone CSR report, and financial reporting and IR) and financial conditions (profitable and unprofitable). Participants in the FS framework group were told that, depending on whether they decided to expand the company's current operations or to invest in a CSR project, the results of the investment would be shown only in the company's annual financial statement. Those in the standalone CSR reporting framework were informed that the company would provide its stakeholders with a standalone CSR report in addition to the annual FS. An example of a CSR report was provided to these participants. Participants in the IR framework group were informed that the company would provide its stakeholders with an integrated report in addition to the annual FS. An example of an integrated report was provided to these participants.[四]

The financial condition was manipulated by presenting participants with the company's current financial condition. The FS relating to the profitable financial condition that was shown to participants clearly indicated that the company was currently reporting a profit. By contrast,

[三] We performed two pilot studies before conducting the actual experiment. We first submitted draft experimental materials to three environmental accounting experts. The primary purpose of this first pilot study was to investigate how realistic the case was and to explore any issues relating to the experimental materials. As a result of this first pilot study, we made some changes to the experimental materials to make these more realistic and to improve their quality and readability. The second pilot study included 18 managers (3 in each cell) and employed the same procedures as the actual experiment reported in this study. The purpose of the second study was to obtain preliminary results relating to the hypotheses developed in this study and to assess the need for any changes prior to conducting the actual experiment. As a consequence of this second study, we made minor changes entailing simplification of the experimental materials. The 18 managers in the pilot study were excluded from the statistical analyses reported in this paper.

[四] See Appendix One for the abbreviated version of the standalone CSR report and the integrated report provided to participants in the experiment.

the FS relating to the unprofitable financial condition that was provided to participants clearly indicated that the company was currently reporting a loss.

Participants, who role-played as the CEO of a company operating in the upstream oil and gas production sector, were asked to make an investment decision. They were informed that the company needed to choose between investing in a production expansion project with an Internal Rate of Return (IRR) of 10 percent over the project's duration of 5 years or investing in a CSR project with an IRR of 6.15 percent.[五] To increase their engagement with the experiment, participants were asked to justify their decisions and describe the project's performance in a memo to the company's stakeholders. They were informed that the memo to the stakeholders would be read out at the company's annual public meeting.

All participants were provided with information on the two alternative projects. After they had reviewed projected cash flows for the two projects, they were asked to make a decision on whether to invest in the production expansion project or in the CSR project. Accordingly, participants were asked the following question: "Which project would you use the available funding to invest in?" They responded to this question by placing a circle next to the chosen alternative. Subsequently, they were asked to provide two reasons for their decision to invest in the selected project, complete a post-experiment questionnaire, and provide demographic information.

[五] Most, if not all, CSR projects are less profitable than other business-related projects (Moser and Martin 2012); hence, our experimental case was realistic.

***Participants***

Managers residing in the US were recruited to participate in this study.[*] We used Qualtrics, an online service that delivers commercial research instruments, to recruit participants. Qualtrics works with industrial partners to build both broad and targeted participant panels (Brandon, Long, Loraas, Mueller-Phillips, and Vansant 2014). The primary advantage of using Qualtrics was that it enabled us to have access to real managers whom we may not have had access to using a traditional convenience sampling approach (Bryant, Hunton, and Stone 2004). Our access to this research population increased the external validity of our findings (Brandon et al. 2014).

Because the experimental task required managers to make an investment decision, we required participants to hold managerial positions in accounting or finance. Criteria for managers' participation in the study were supervision of at least 10 subordinates, holding a minimum of a bachelor degree, at least 3 years of managerial experience, and work experience in accounting or finance. We screened respondents by incorporating these criteria into the questionnaire. Candidates were asked to answer questions about their current positions, numbers of subordinates, work experience, and educational backgrounds. Those who did not meet any of the above criteria were immediately barred from further involvement in the experiment.

Participation was voluntary, and we told participants that we were looking for individuals who fulfilled certain criteria. They were informed that this study aimed to investigate the impact of disclosure frameworks on internal decision making. To increase participants' engagement

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[*] To ensure that respondents were working in a firm located in the US., we asked them to indicate the location of their companies at the beginning of the survey. Those who selected a location other than US were not permitted to participate in the survey. The main advantage of using managers from one region is that it minimizes the problem of sample heterogeneity (Moores and Yuen 2001).

with the experimental materials, we informed them that they could win a bonus if they answered the comprehension questions at the conclusion of the experiment reasonably well. Participants took an average of 32 minutes to complete the experiment. Given the conditions that we imposed on our target subject pool, we paid Qualtrics an average of USD 35 per participant who completed the experiment.[七] A total of 6,657 respondents were recruited at the commencement of the survey. However, we obtained usable data from only 154 participants who passed all of the qualifying questions and completed the survey. Qualtrics ensured that users were prevented from repeatedly taking the survey. This restriction also prevented individuals who did not qualify from resubmitting their answers. The average age of the qualified participants was 44 years and 6 months (ranging from 24–64 years), and the average duration of their full-time work experience was 21 years and 3 months (ranging from 4–41 years). Of the participants, 92 (60 percent) were male and 62 (40 percent) were female.

## IV. DATA ANALYSES AND RESULTS

### Manipulation Check

To assess whether the reporting framework treatment was successfully manipulated, we asked participants to indicate the company’s disclosure requirement. After they had read the disclosure of CSR activities, they were asked to indicate how their companies disclosed their CSR activities. Participants responded to this question by selecting one of the following options: 1) Financial statement only; 2) Financial statement and a standalone CSR report; and 3) IR. All of the participants answered this question correctly. Regarding the financial condition treatment,

[七] Qualtrics follows a policy of not disclosing the amount of compensation they pay to respondents. However, our requirement was for each participant to be paid a bonus of $7 for answering the comprehension questions.

we assessed this manipulation by asking participants whether their companies had reported a profit or a loss. All of the participants answered this question correctly.[八]

We also assessed participants' overall understanding of the experimental task. To accomplish this, we asked participants to rate their level of agreement with three statements on task understandability using a 9-point scale centered at 5 (1 = strongly disagree up to 9 = strongly agree). We asked whether 1) the case was easy to understand, 2) the case requirements were difficult to complete, and 3) the case was realistic. The average scores for these three questions were 7.41, 3.22, and 7.32, respectively, indicating that participants' comprehension of the case was reasonable, the case requirements were not too difficult, and the case was realistic.

**Descriptive Statistics**

Table 1 shows the descriptive statistics of frequency distributions by experimental condition for the dependent variable (investment choice) used to test our hypotheses. Although we aimed for equal numbers of participants in each cell, the final numbers of participants per cell were not equal. Despite our random assignment of equal numbers of participants to each cell at the start of the experiment, some participants were screened out because they did not meet the set criteria in the questionnaire, or because they voluntarily decided to discontinue the experiment. Overall, 112 participants (72.73 percent) chose to invest in the CSR project and 42 participants (27.27 percent) chose to invest in the expansion project. For the FS condition, 33 participants (64.71 percent) chose to invest in the CSR project and 18 participants (35.29 percent) chose to invest in the expansion project. For the standalone CSR report condition, 44 participants (86.27 percent) chose to invest in the CSR project and seven (13.73 percent) chose to invest in the

[八] Participants who did not make the correct choice for these two manipulation check questions were debarred from continued participation in the survey. Only participants who passed this manipulation check were asked to answer the remaining survey questions.

expansion project. Lastly, for the IR condition, 35 participants (67.31 percent) chose to invest in the CSR project and 17 participants (32.69 percent) chose to invest in the expansion project. This pattern of results is consistent with H1 and H2.

[Insert Table 1 here]

**Logit Model**

This study aimed to investigate whether the likelihood of managers investing in a CSR project was influenced by different reporting frameworks as well as by companies' financial conditions. To model this relationship, we made use of the Logit function. This model allows for the use of a binary dependent variable in a linear relationship with several independent variables (MacDonald 2014) . More precisely, we assumed that the reporting framework used by a company, and its financial condition, linearly predicted the Logit of the probability of its investing in a CSR project. Formally, let $\pi_i$ be the probability that $manager_i$ will invest in a CSR project, using a reporting framework defined by $CSR_i$ ( a value of 1 if the reporting framework is standalone CSR and 0 if it is FS or IR) and $IR_i$ (a value of 1 if the reported framework is IR and 0 if it is FS or standalone CSR), and reporting the financial condition $PROFIT_i$ (1 if in profit, 0 if in loss). The assumed relationship between $\pi_i$, $CSR_i$, $IR_i$ and $PROFIT_i$ is as follows:

$$Logit(\pi_i) = \alpha + \beta_1 CSR_i + \beta_2 IR_i + \beta_3 PROFIT_i \, , \tag{1}$$

where:

$$Logit(\pi_i) = Log\left(\frac{\pi_i}{1-\pi_i}\right) . \tag{2}$$

The Logit model estimates the coefficient vector $\pi_i$, based on maximization of the likelihood function specified in equation (2) (Cox 1972). $\beta_1$ is the increment in log odds of being in the standalone CSR reporting framework. Therefore, $e^{\beta 1}$ gives the odds of an increase in the likelihood of managers investing in the CSR project using the standalone CSR reporting framework relative to those using the FS framework (the baseline group). Similarly, $\beta_2$ is the increment in log odds of being in the IR framework. Therefore $e^{\beta 2}$ gives the odds of an increase in the likelihood of managers investing in the CSR project using the IR framework relative to those using the FS framework. $\beta_3$ is the increment in log odds of being in the PROFIT companies. Therefore, $e^{\beta 3}$ gives the odds of an increase in the likelihood of managers investing in the CSR project within companies reporting profits relative to those located within companies reporting losses. Thus, the parameters represent the incremental effects of each condition. The intercept corresponds to a baseline group (use of FS framework and companies reporting a loss). The other parameters are incremental effects for other groups relative to the baseline group.

**Testing the Hypotheses**

Table 2 shows the values of $\alpha$, $\beta_1$, $\beta_2$, and $\beta_3$ that indicate the maximum likelihood of CSR investment (the best fitted model). Hence the following equation represents the fitted model:

$$Logit(\pi_i) = 0.43 + 1.24CSR_i + 0.11IR_i + 0.35PROFIT_i \qquad (3)$$

[Insert Table 2 here]

Overall, our model explained a significant part of the likelihood of a manager investing in CSR projects (Chi square = 8.64, $p < 0.05$). The results showed that a company using the standalone CSR reporting framework was more likely than others to invest in a CSR project ($p = 0.01$). The associated odds ratio was 3.45, meaning that the likelihood of investment in a CSR project by a company using standalone CSR reporting was estimated to be 3.45 times greater than that of a company using an FS reporting framework. These results supported H1.

Furthermore, the results revealed no difference in the likelihood of investment in a CSR project by managers using IR and those using FS frameworks ($p = 0.78$). These results were consistent with H2.

Regarding the financial condition treatment, the results showed that the likelihood of investment in a CSR project by managers of companies reporting a profit and those of companies reporting a loss did not differ ($p = 0.34$). These results did not support H3.

Table 2 can be reconstructed to investigate the impact of a shift from the standalone CSR reporting framework to the IR framework, or to the FS framework (i.e., the CSR constituting the base line case). Table 3 shows the Logit result of this scenario.

[Insert Table 3 here]

As shown in Table 3, a shift from the standalone CSR reporting framework to the IR framework would significantly decrease managers' willingness to invest in a CSR project ($p = 0.03$). The associated odds ratio was 3.08, meaning that the likelihood of investment in a CSR project by a company using an IR framework was estimated to be 3.08 times lower than that of a company using a standalone CSR reporting framework. Furthermore, shifting from a standalone CSR reporting framework to an FS framework would significantly decrease managers' willingness to invest in a CSR project ($p = 0.01$). The associated odds ratio was 3.45, meaning that the likelihood of investment in a CSR project by a company using an FS framework was estimated to be 3.45 times lower than that of a company using a standalone CSR reporting framework.[九]

**Supplemental Analysis**

We performed an additional analysis to investigate the inconsistent results obtained for H3. We pooled the reporting frameworks treatment and divided our sample into companies reporting a profit and those reporting a loss. Table 4 shows the results of this analysis. While we predicted that managers in profitable (unprofitable) companies would be more (less) willing to invest in CSR projects, the results indicated that both profitable and unprofitable companies were significantly more willing to invest in the less profitable CSR project than in the more profitable expansion project ($X^2 = 21.28$, $p < 0.001$ and $X^2 = 11.21$, $p < 0.001$, for profitable and unprofitable companies, respectively). While this result is inconsistent with the prediction based on RBV, the willingness of managers of unprofitable companies to invest in CSR projects appears to support the prediction of social comparison theory (Festinger 1954). This theory posits that individuals determine their social and personal worth by comparing themselves to others. People constantly evaluate themselves according to various dimensions such as attractiveness, intelligence, and success in relation to their peers to obtain a positive self-image (Beach and Tesser 1995). People obtain a positive self-image such as having pride and being intelligent, talented and successful when they know that their performance exceeds that of their counterparts. When their performance is worse than that of their counterparts, they experience a negative self-image entailing feelings of shame, foolishness, failure, and unproductiveness. Festinger (1954) argued that a negative self-image was so uncomfortable that people behaved competitively to generate and maintain a positive self-image.

[九] We also performed an additional analysis by including gender as a control variable. The results (not reported in this paper) indicated that gender did not significantly affect managers' willingness to invest in CSR.

In the context of our study, companies in poor financial condition will be motivated to invest in CSR activities to compensate for their low financial performance, as investing in a CSR project puts the company at the front end of CSR performance. Steele (1988) argued that in multiple performance dimensions, people preferred to excel in one area when they did worse in other areas rather than performing in a mediocre way in all areas. Moreover, Frey (2007) has argued that outperforming peers in at least one performance dimension satisfies an individual's desire for social distinction. Our results suggest that managers within companies in poor financial condition perceive investment in a CSR project as a means to excel in one performance dimension (i.e., CSR).

[Insert Table 4 here]

We also performed simple comparative analyses to investigate whether managers' willingness to invest in a CSR project was consistent across reporting frameworks. All analyses in this section pooled together profitable and unprofitable conditions. Table 5 shows the results of the chi-square analyses. The results suggest that across all three reporting frameworks, managers were significantly more willing to invest in a less profitable CSR project than in a more profitable expansion project ($X^2 = 4.41$, $p = 0.036$; $X^2 = 26.84$, $p < 0.001$; and $X^2 = 6.23$, $p = 0.013$ for FS, standalone CSR, and IR frameworks, respectively). Overall, the results indicated that managers considered the interests beyond those of shareholders when choosing between investment alternatives. They also considered the interests of wider stakeholders, including society at large. One plausible reason for these results is that managers are concerned about the rising societal demand for companies, particularly those in highly polluting industries such as oil and gas, to be more socially responsible. This has resulted from the recent spate of publications concerned with the effects of global warming on human life.

[Insert Table 5 here]

Interestingly, managers offered diverse reasons to justify their investment choices. Our study indicated that the majority of managers (72.73 percent), who participated in our study, chose to invest in the less profitable CSR project rather than the more profitable expansion project. Their main reason for doing so was to meet the demands of wider stakeholders and to make their companies more socially responsible. This reason is consistent with the prescription of legitimacy theory (Dowling and Pfeffer 1975, Deegan and Rankin 1996). We present three representative statements by participating managers, justifying their decision to invest in the less profitable CSR project:

> Statement 1: "Positive public relations in going to a more eco-friendly process."
>
> Statement 2: "Investors preferring companies that demonstrate a commitment to protecting the environment."
>
> Statement: "More environment-friendly for the community."

The results also indicated that 27.3 percent of the managers who participated in our study chose to invest in the more profitable expansion project. Their main reason for investing in the expansion project was shareholder value maximization. This reason appears to be consistent with the prevailing view in the conventional accounting and finance literature that companies will only invest in CSR activities if such investments increase shareholder value (Shank et al. 2005, e.g. Dhaliwal et al. 2011). The following three representative statements by participating managers reveal the reasoning underlying their choice to invest in the production expansion project:

> Statement 1: "The main reason for a corporation's existence is to satisfy its shareholders"
>
> Statement 2: "To increase profit for shareholders"

Statement 3: "Greater returns to shareholders"

Overall, the results of our study suggest that while the majority of respondents believed that companies need to consider the interests of various stakeholders, including society at large, when making investment decisions, some managers still believed that the main purpose of a company is shareholder value maximization.

## V. CONCLUSIONS

This study has investigated the influence of reporting frameworks and financial conditions on managers' willingness to invest in a CSR project. We have argued that the opportunity to disclose the company's CSR activities within a standalone CSR report motivates managers to invest in a CSR project. Furthermore, we have contended that although the IR model is conceptually appealing, because it is still at a preliminary stage, and because of measurement issues and the inherent complexity of the conceptual framework, disclosure of CSR activities using this framework will not incrementally impact on managers' willingness to invest in a CSR project. Finally, based on RBV, we predicted that profitable companies would be more likely to invest in a CSR project compared with unprofitable companies.

Overall, the results of our experiment suggest that managers consider the interests of wider stakeholders when making investment decisions. Moreover, they perceive that disclosure of the company's CSR activities within a standalone CSR report mitigates the negative financial consequences of their investment in CSR activities. Our study suggests that much more needs to be done regarding the IR initiative to familiarize managers with the reporting requirements of this framework. Our study suggests that disclosure of a company's CSR activities using the IR framework, in its current stage of development, does not significantly impact on managers' willingness to invest in a less profitable CSR project. These results are consistent with those of more recent studies suggesting that disclosure that is focused on societal benefit (a standalone report in our setting) has a more positive impact on investment decisions than disclosure that provides information on both costs and societal benefits (an IR framework in our setting) (Martin and Moser 2016).

Our study suggests three avenues for future research in this area. First, we assumed that managers were aware of the requirements for both the standalone CSR report and IR. While this may be true for standalone CSR reporting given its use over the last decade, the IR framework is relatively new, and most managers may not be aware of its requirements. Future research could investigate how the degree of familiarity with the IR framework affects managers' investment decisions. For example, studies could include training on how to prepare the integrated report and could subsequently compare managers' willingness to invest in a CSR project based on whether or not they participated in the training program. Second, we focused our investigation on the impact of reporting frameworks and financial conditions on the likelihood of managers investing in a CSR project. This study can be extended by conducting an in-depth case study to investigate other important variables that managers consider when making investments related to CSR activities. Finally, while our study is the first attempt to investigate the impact of CSR reporting frameworks on the investment decisions of internal users of financial information, future research could investigate the impact of CSR reporting frameworks on other important decisions such as performance evaluation and compensation systems.

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**Table 1: Descriptive statistics of the frequency distribution of managers' choices between a more profitable expansion project (EXP) and a less profitable CSR project (CSR)**

| | Financial Reporting | | Financial Reporting + Stand Alone CSR Report | | Integrated Reporting | | Total | |
|---|---|---|---|---|---|---|---|---|
| | **EXP** | **CSR** | **EXP** | **CSR** | **EXP** | **CSR** | **EXP** | **CSR** |
| **Profitable Company** | 9 | 17 | 3 | 23 | 7 | 20 | 19 | 60 |
| **Unprofitable Company** | 9 | 16 | 4 | 21 | 10 | 15 | 23 | 52 |
| **Total** | 18 | 33 | 7 | 44 | 17 | 35 | 42 | 112 |

**Table 2: Logit regression results for the impact of reporting frameworks and financial conditions on managers' willingness to invest in a CSR project (with the FS framework as the baseline).**

| Variable | DF | Parameter Estimate | Standard Error | P = value | Odds Ratio |
|---|---|---|---|---|---|
| Intercept | 1 | 0.4301 | | | |
| CSR | 1 | 1.2389 | 0.5029 | 0.0138 | 3.4518 |
| IR | 1 | 0.1135 | 0.4177 | 0.7859 | 1.1201 |
| PROFIT | 1 | 0.3543 | 0.3723 | 0.3413 | 1.4252 |
| Chi Square = 8.6395; df = 3; p = 0.0345, n = 154 | | | | | |

**Table 3: Logit regression results for the impact of reporting frameworks and financial conditions on managers' willingness to invest in a CSR project (with the standalone CSR framework as the baseline).**

| Variable | DF | Parameter Estimate | Standard Error | P = value | Odds Ratio |
|---|---|---|---|---|---|
| Intercept | 1 | 1.6690 | | | |
| FS | 1 | -1.2389 | 0.5029 | 0.0138 | 3.4518 |
| IR | 1 | -1.1254 | 0.5044 | 0.0257 | 3.0814 |
| PROFIT | 1 | 0.3543 | 0.3723 | 0.3413 | 1.4252 |
| Chi Square = 8.6395; df = 3; p = 0.0345, n = 154 | | | | | |

**Table 4: Chi-square results for differences in management investment choices between a less profitable CSR project and a more profitable expansion project (divided by companies' financial conditions)**

| | Observed Frequency<br>(1) | Expected Frequency<br>(2) | Difference<br>(3) = (1)-(2) | Difference squared<br>(4) = $(3)^2$ | Difference squared/Expected Frequency<br>(5) = (4)/(2) |
|---|---|---|---|---|---|
| **Panel A: Profitable companies**<br>Chi-square: 21.278, df = 1, p < 0.001 | | | | | |
| CSR | 60 | 39.5 | 20.5 | 420.25 | 10.64 |
| Expansion | 19 | 39.5 | -20.5 | 420.25 | 10.64 |
| **Panel B: Unprofitable companies**<br>Chi-square: 11.213, df = 1, p < 0.001 | | | | | |
| CSR | 52 | 37.5 | 14.5 | 210.25 | 5.61 |
| Expansion | 23 | 37.5 | -14.5 | 210.25 | 5.61 |

**Table 5: Chi-square results for the difference in managerial investment choices between a less profitable CSR project and a more profitable expansion project (divided by CSR framework)**

| | Observed Frequency (1) | Expected Frequency (2) | Difference (3) = (1)-(2) | Difference squared (4) = $(3)^2$ | Difference squared/Expected Frequency (5) = (4)/(2) |
|---|---|---|---|---|---|
| **Panel A: Financial Statement framework:** Chi-square: 4.412, df = 1, p = 0.036 | | | | | |
| CSR | 33 | 25.5 | 7.5 | 56.25 | 2.21 |
| Expansion | 18 | 25.5 | -7.5 | 56.25 | 2.21 |
| **Panel B: CSR standalone report framework:** Chi-square: 26.843, df = 1, p < 0.0001 | | | | | |
| CSR | 44 | 25.5 | 18.5 | 342.25 | 13.42 |
| Expansion | 7 | 25.5 | -18.5 | 342.25 | 13.42 |
| **Panel C: Integrated Reporting framework:** Chi-square: 6.321, df = 1, p = 0.013 | | | | | |
| CSR | 35 | 26 | 9 | 81 | 3.12 |
| Expansion | 17 | 26 | -9 | 81 | 3.12 |

## Appendix 1: Abbreviated version of the CSR standalone report

**ABC Company**
**Corporate social responsibility report extract**
**With investment in carbon dioxide (CO2) reduction technology**

At ABC, we strive to be a good corporate citizen in everything we do. We have a commitment to do what is right for the community and the environment.

We have made significant progress this year towards our goals of reducing greenhouse gas emissions and conserving land and water by investing in a novel carbon dioxide (CO2) reduction technology. Our new technology provides for more efficient carbon dioxide (CO2) capture and storage than the traditional oxy-fuel combustion system by:

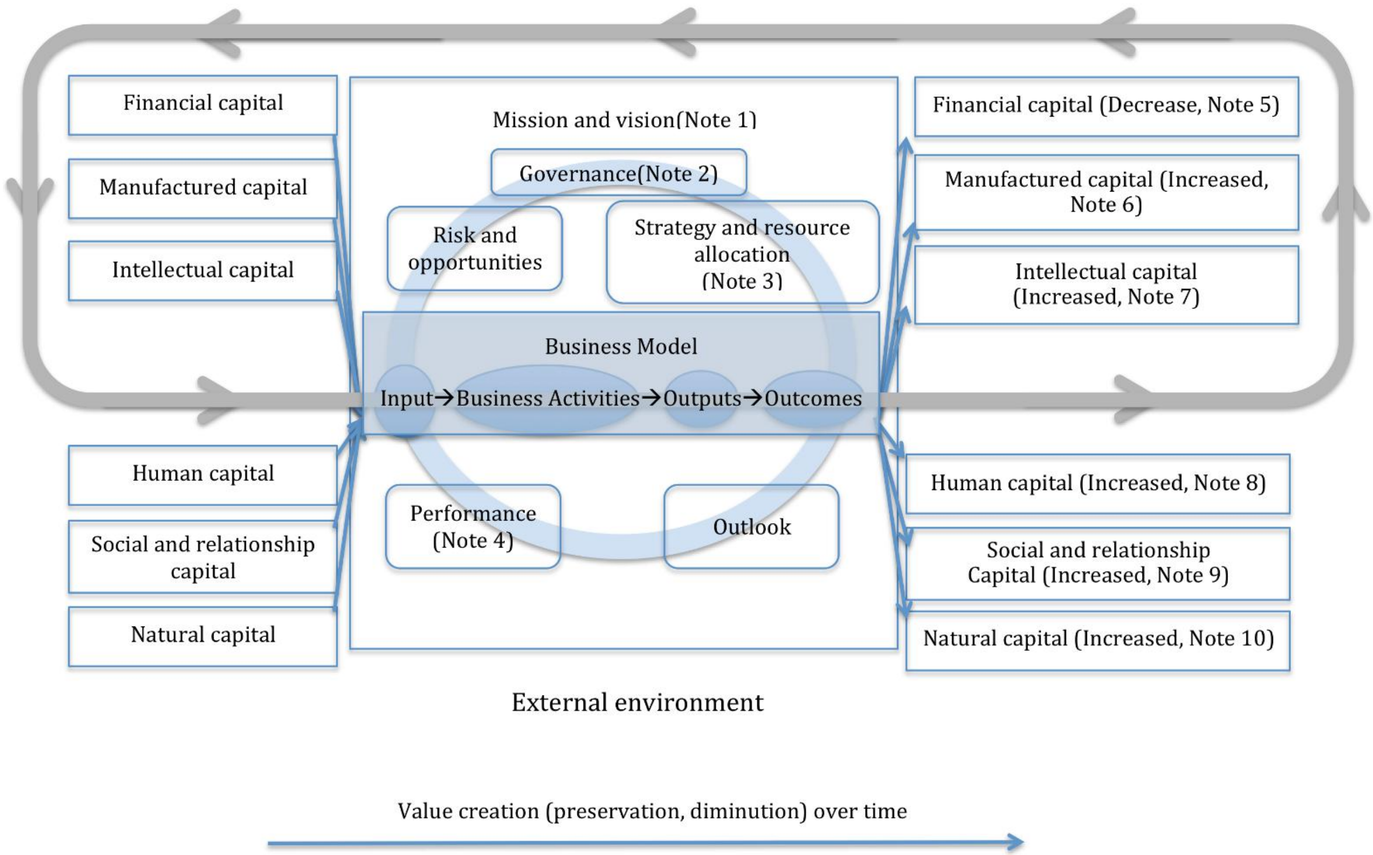
1. Less water use
2. Reduced land disturbance
3. Zero thermal mono-nitrogen oxides
4. Reduced $CO_2$ emissions

$CO_2$ emissions using the traditional oxy-fuel combustion over the next five years is expected to be 210,000 tonnes/year as opposed to the carbon dioxide (CO2) reduction technology that generates 160,000 tonnes of $CO_2$ emissions. Therefore, the reduction in $CO_2$ emissions by using the new technology is 50,000 tonnes/year (23% reduction).

In addition to lowering our environmental footprint, we were also able to make significant savings in costs by avoiding paying the penalty that would have been inevitable had we not invested in the $CO_2$ reduction technology. The penalties are expected to rise in the long run and we believe that the investment we made was a proactive decision to mitigate the risk. We are also protecting ourselves against the risk of losing some of our customers and suppliers as they are increasing placing emphasis on having transactions with environmentally cautious producers.

## Appendix 1: Abbreviated version of the Integrated Report

**ABC Company**
**Integrated Report**
**With investment in carbon dioxide (CO2) reduction technology**




**Our vision (notes 1):**

To be the premier company in the upstream oil and gas sector for the maximum benefit of all our stakeholders.

**Our strategy (note 3)**

Our strategy is to maximize value to all stakeholders by expanding our production and conduct our business sustainably and cost effectively. ABC strives to continuously improve its performance in the field of safety, health, and environment.

**Governance (note 2)**

The Board has various committees that deal with matters that are delegated to them. These committees include audit, sustainability, and compensation committees.

**Current Year Performance Highlights (note 4)**

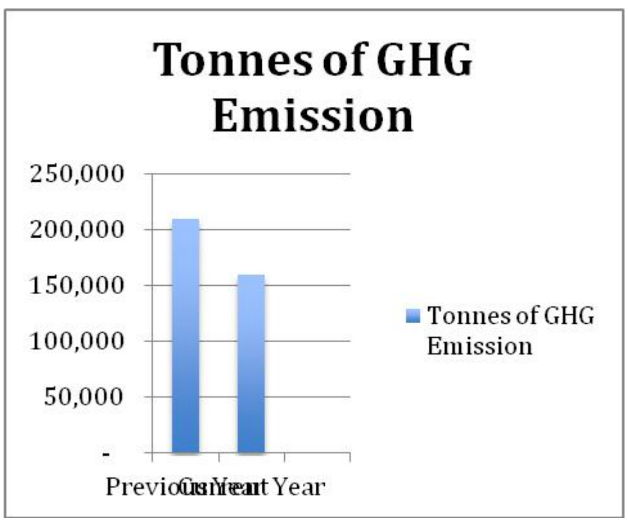
Net income for the year increased by $ 192,000 as the result of our recent investment.

**Financial capital (note 5):** We financed the investment in carbon dioxide ($CO_2$) reduction technology by obtaining a long-term loan from CIBC of $5 million. Due to our investment in the carbon dioxide ($CO_2$) reduction project, we are able to obtain a cost saving of $1.680 million per year.

**Manufactured capital (note 6):** By using financial capital to make the investment, there was a $ 4 million (net of depreciation) increase in machinery and equipment**.**

**Non- Financial**

**Natural capital (Note 10):** By investing in a carbon dioxide ($CO_2$) reduction technology, we were able to reduce the $CO_2$ emissions by 23% per year.




**Intellectual Capital (Note 7):** We were able to patent the new technology to reduce carbon dioxide ($CO_2$) and environmental footprint.

**Social (Note 9):** Our investment in the environmentally friendly technology has put our company in the front end of the socially responsible companies. We estimate that this improved social image reduces the number of staff needed to respond to stakeholder questions regards our environmental performance, and we may be able to seek a listing in social indexes such as Dow Jones Sustainability Index. This could lead to better relationships with potential investors interested in investing in socially responsible companies.

**Human Capital (Note 8):** We will train our employees to use the new technology that will result in improved knowledge about carbon dioxide ($CO_2$) reductions that we can capitalize on in the future.  As a result, our employees' motivation and loyalties would be increased and more aligned with our company's strategy, vision, mission and goals.