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## Article

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Global Business & Finance Review (GBFR)

## Provided in Cooperation with:

People & Global Business Association (P&GBA), Seoul

*Suggested Citation:* Lee, Seunghye; Kwon, Dokyun; Kim, Yangmin (2023) : Aiming for the future: CEO future focus and corporate social performance, Global Business & Finance Review (GBFR), ISSN 2384-1648, People & Global Business Association (P&GBA), Seoul, Vol. 28, Iss. 7, pp. 11-27, <https://doi.org/10.17549/gbfr.2023.28.7.11>

This Version is available at:

<https://hdl.handle.net/10419/305935>

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## Aiming for the Future: CEO future focus and corporate social performance

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### ABSTRACT

**Purpose:** This study aims to investigate whether CEO future focus leads to improvements in the CSP. Although there has been extensive research on the antecedents of CSP, little has addressed the role of CEOs' subjective biases in determining how future time frames affect CSP. This study fills this gap by adopting the concept of CEO future focus and examines the relationship between CEO future focus and CSP.

**Design/methodology/approach:** The sample of this study includes 933 (firm-year) observations from 178 publicly traded U.S. manufacturing firms between 2005 and 2011. This study conducts generalized estimating equations (GEE) model to test our hypotheses.

**Findings:** The finding shows that a CEO's future focus is positively related to CSP. Given the long-term orientation of CSP, this result shows that a CEO with a strong future focus is more likely to be looking ahead at possible future gains by enhancing CSP. The results also show that various boundary conditions shape the positive relationship between CEO future focus and CSP. Specifically, this study finds that the positive relationship between CEO future focus and CSP is weakened when a CEO has longer tenure, when a CEO has a higher proportion of fixed pay in his/her pay packages, and when an organization confronts a shifting and challenging external environment.

**Research limitations/implications:** This study extends both the strategic leadership and CSR literature in that a CEO's temporal foci, especially future focus, influence corporate social activities. However, this study has limitation related to the measurement of future focus. In addition, this study only considers CEO future focus rather than the past and present focus.

**Originality/value:** This study extends the study of CEO characteristics by investigating how micro-foundations, in the form of CEO future focus, affect CSP. The study provides more in-depth understanding of CEO characteristics by adopting the concept of future focus and examine its impact on the CSP. In addition, the study provides a more precise understanding of the relationship between CEO future focus and CSP by investigating various boundary conditions such as CEO and industry characteristics.

*Keywords:* CEO future temporal focus, Corporate social performance, CEO tenure, CEO pay structures, Industry dynamism

## I. Introduction

Over the decade, corporate social performance (CSP) has been under the limelight for contemporary

corporations. For example, in the last quarter of 2022, Honeywell International Inc. and Futurum Research surveyed 753 global business leaders involved in their company's environmental initiatives. According to the survey, more than 70% of global companies say they are increasing sustainability budget over the next 12 months, while only about 2% are planning to reduce it (Holger, 2023). The EU's Sustainable

Received: Aug. 11, 2023; Revised: Oct. 2, 2023; Accepted: Oct. 16, 2023

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Finance Disclosure Regulation (SFDR), that was first introduced in 2019, is also evolving. SFDR is part of the EU Action Plan on Financing Sustainable Growth, with an overarching goal of providing a link between finance and sustainability. It provides a comprehensive sustainability disclosure requirement covering a wide range of environmental, social and governance metrics and criteria to improve transparency and prevent greenwashing.

Given the growing importance of CSP, it has become an important topic in management literatures (e.g., Chen et al., 2019; Chin et al., 2013; Duong, 2022; Yuan et al., 2020; Zygliopoulos et al., 2012). Especially, extensive prior studies report that CEO characteristics as an important antecedent of CSP (Chin et al., 2013; Jiraporn & Chintrakarn, 2013; Manner, 2010; Peng, 2020; Zhang et al., 2023). While previous studies posit that CEOs' characteristics including CEO age (Oh et al., 2018), tenure (Chen et al., 2019), and duality (Ahmad et al., 2017) play key roles to make an investment to corporate social activities, little is known about how CEOs' psychological traits, particularly through temporal focus, affect CSP.

Temporal focus describes the extent to which people devote their attention to perceptions of the past, present, and future (Bluedorn, 2002; Shipp et al., 2009). Individuals have distinctive perspectives on time, which are past, present, and future (Lewin, 1942). We build our arguments by adopting the concept of temporal focus based on the upper echelons perspective (Hambrick & Mason, 1984). CEOs' perceived time horizon (i.e., temporal focus) has significant influence on firm-level strategic decisions (Back et al., 2020; Chen & Nadkarni, 2017; Desjardine & Shi, 2021). In other words, CEOs' perception of time shapes expectations and assessments of strategic decisions. Since enhancing CSP requires the firm to have a long-term orientation and helps a firm to gain positive relationships with stakeholders in the future, CEOs should be attentive to future outcomes over the long term, as reflected by future focus. Thus, we posit that CEO future focus is more theoretically relevant to CSP.

This study aims to investigate whether CEO future

focus leads to improvements in the CSP. Using a panel dataset of 933 publicly traded firms in the U.S. between 2005 and 2011, we investigate following research questions: (1) How does CEO future focus affect the CSP? (2) How CEO characteristics (i.e., CEO tenure, the proportion of fixed pay), and industry characteristics (i.e., industry munificence, industry dynamism) moderate the relationship between CEO future focus and CSP?

## II. Literature Reviews

### A. CEO Temporal Focus

Temporal focus has its origins in Lewin's (1942) definition of the individual's time perspective as the totality of his or her psychological sense of the past, present, and future. Time perspective refers to the different perspectives on an individual's past, present, and future (Gamache & McNamara, 2019). One element of time perspective is temporal focus which is defined as an individual temporal focus as "the extent to which people characteristically devote their attention to perceptions of the past, present, and future" (Shipp et al., 2009: 1). Since psychology and management studies have focused on the impact of psychological perspectives of time on people's decision-making process, there has been various definitions are used (see Table 1).

Temporal focus can be divided into three distinct elements: *past focus*, *present focus*, and *future focus*. Instead of opposite ends of a continuum, the individual's past, present, and future focus refer to distinct dimensions (Shipp et al., 2009; Nadkarni & Chen, 2014). In other words, temporal focus is represented by these three separate time perspectives. As such, "people can shift their attention among different time periods, and that focusing on one period does not necessarily prevent thinking about the other two" (Shipp et al., 2009: 2).

Individuals with different temporal foci have developed distinctive attention allocation, in which

they focus more on certain time periods than others (Desjardine & Shi, 2021). First, people with a strong past focus tend to make decisions based on their past experiences or knowledge (Clark & Collins, 1993). These people have a strong tendency to rely on their past experiences and knowledge in the current decision making or learning process. Bluedorn (2002) argued that past focus is related to the bias of 'overgeneralization'. In other words, a person with a strong past focus places great importance on the similarities between his past experience and the present but tends to relatively disregard pertinent circumstantial differences between the two periods. On the other hand, a person with a strong present focus assigns the most importance on understanding the current situation and acting accordingly in the decision-making process. In addition, they have a strong tendency to seize opportunities through voluntary action (Shipp et al., 2009). In other words, people with a strong present focus make decisions based on real-time information from the current internal and external environment of the firm, with less regard for future results (Zimbardo & Boyd,

1999; Zimbardo et al., 1997). Finally, future focus refers to how much attention is paid to events that have not yet occurred (Chandy & Tellis, 1998; Yadav et al., 2007). A person with a strong future focus assumes future situations in the decision-making stage, and attempts to predict the future (Bluedorn, 2002; Nadkarni & Chen, 2014). In addition, they are always factoring potential changes or opportunities, while responding quickly to future environmental changes (Yadav et al., 2007). Shipp and Aeon (2019) argue that people with a strong future focus set goals and act proactively rather than resorting to procrastination. Previous studies have reported that people with a strong future focus are optimistic, a trait that improves work efficiency, personal life situations, and organizational citizenship behavior (Buehler & Griffin, 2003; Kooji et al., 2018; Rabinovich & Morton, 2012; Shipp & Aeon, 2019; Strobel et al., 2013).

Prior studies argue that an individual's disposition toward time has an important effect on decision-making (e.g., Bandura, 2001; Bluedorn & Jaussi, 2008; Fried & Slowik, 2004; Sanna et al., 2003). As such, strategic management researchers have

**Table 1.** Definitions of Temporal Focus

Authors(year)	Temporal focus term	Definition
Bluedorn & Ferris (2004, p.114)	Temporal depth	"The temporal distance into the past and future that individuals or collectivities typically consider"
Chen & Nadkarni (2017, p.32)	Temporal disposition	"time urgency (the feeling of being chronically hurried) and pacing style (one's pattern of effort over time in working toward deadlines)"
Gamache & McNamara (2019, p.923)	Temporal focus	"an individual dispositions that reflects how people think about time, based on the extent to which individuals characteristically direct their attention to the past, present, or future"
Guo et al. (2012, p.1031)	Temporal orientation	"cognitive involvement in the past, present, or future, and the tendency to experience emotional and behavioral reactions to these temporal regions"
Holman & Silver (1998, p.1)	Temporal perspective	"the overall span of cognitive involvement across past, present, and future life domains"
Shipp & Aeon (2019, p.1)	Temporal focus	"People's tendency to characteristically think about the different periods of their lives"
Shipp et al. (2009, p.1)	Temporal focus	"characteristically devote their attention to perceptions of the past, present, and future"
Lewin (1951, p.75)	Time perspective	"totality of the individual's views of his psychological future and his psychological past existing at a given time"
Zimbardo & Boyd (1999, p.1)	Time perspective	"the construction of psychological time, emerges from cognitive processes partitioning human experience into past, present, and future temporal frames"

focused on CEOs' or leaders' temporal focus and its impacts on strategic outcomes. For example, Nadkarni and Chen (2014) found that CEOs' temporal focus is related to the rate of new product introduction in dynamic environments. Gamache and McNamara (2019) found that both a past temporal focus and a future temporal focus influence a CEO's attention to media reactions and subsequent acquisition activity. Using the behavioral agency model, Desjardine and Shi (2021) found that both a present temporal focus and a future temporal focus shape the relationship between different forms of option pay and merger and acquisition investment.

## B. CEO Future Focus and CSP

Our paper is built on the premise that decisions made by CEOs who are trying to maximize longer term corporate financial performance (CFP), tend to be socially responsible (c.f., Mahapatra, 1984; Mahoney & Thorne, 2005). One of the most heavily studied topics in the corporate social responsibility literature is the relationship between CSP and CFP. While most recent studies show a positive correlation between CSP and CFP, it is not perfectly clear whether the effects of CSP on CFP are instantaneous or time lagged.

Based on a meta-study examining the relationship between CSR/ESG and CFP with more than 1,000 empirical studies, Whelan, Atz, Van Holt and Clark (2021) found that there is overall a positive relationship between CSP/ESG and financial performance, and improved financial performance due to ESG became more marked over longer time horizons. More specifically, their model suggests that, *ceteris paribus*, a study with an implied long-term focus is 76% more likely to find a positive or neutral result. Whelan et al.'s (2021) findings support previous studies that report corporate investments in environmental sustainability had effect on corporate financial performance over the long term rather than in the short term (e.g., Dorfleitner et al., 2018; Hang et al., 2019).

CEOs with a strong future focus make decisions based on long-term rather than short-term perspectives

(Yadav et al., 2007). Because CEOs with a strong future focus tend to endow prospective wealth rather than current wealth, they value the impact of current decisions on their companies' future, anticipate future opportunities or changes, and seize opportunities faster than other CEOs (Desjardine & Shi, 2021; Nadkarni & Chen, 2014). From a strategic decision-making standpoint, expecting future return and long-term perspective are closely related to engaging corporate social activities for the following reasons (Kane, 2002; Mahapatra, 1984; Mahoney & Thorne, 2005).

First, CEOs with a strong future focus put more importance on future gains by engaging social activities. Increasing CSP fosters good relationships with stakeholders and enhances a positive corporate image to stakeholders which helps firm to increase future returns (Servaes & Tamayo, 2013).

Second, investment to enhance CSP has a long-term time frame. In other words, a specific period is required to generate financial results by improving the company's image or through good responses in the stock market (Yuan et al., 2020). Given the long-time horizon for CSR investment, CEOs' cognition regarding "time" is a key factor that directly involves strategic decision about enhancing CSP. To increase CSP, a CEO's willingness to continue investing long-term by focusing on the profits that companies can obtain in the future based on investment rather than the near-term loss will be critical.

In summary, we posit that CEO future focus is positively associated with CSP because increasing social activities can establish favorable relationships with stakeholders which requires a long time. Because it takes time to realize the financial benefits of CSP, CEOs with a strong future focus are more likely to improve CSP, vis-à-vis CEOs with a weak future focus.

**Hypothesis 1:** CEO future focus is positively related to CSP.

### C. The Moderating Role of CEO Tenure

CEO tenure is a key observable characteristic of the CEO that affects the strategic decision-making and performance of the company. It is also reported as a factor that influences the match between an organization and its environment, and the management paradigm (Barker & Mueller, 2002; Herrmann & Datta, 2006; Miller, 1991).

CEOs with short tenures have limited time to accumulate information on and experience with their related firms since sufficiently understanding firms' operations and developing social capital with stakeholders takes considerable time. Such CEOs may be tempted to solidify their positions within their organizations and validate their capabilities to stakeholders through engaging CSR activities. By increasing CSP, the new CEO can provide a positive signal to various stakeholders inside and outside the company that said CEO considers the general social issues (Bravo et al., 2012). However, as the tenure increases, the CEO is trapped in the fixed paradigm and adopt more conservative attitudes toward change (Chen & Zheng, 2014; Hambrick & Fukutomi, 1991). As CEO tenure increases, the firm will also tend to have more inertia thereby resisting external pressures for change (Miller, 1991). Wu, Levitas, and Priem (2005) argue that long-successful CEOs have strongly established repertoires that narrow their scope of search for new practices or information. In addition, CEOs with long tenures will no longer have to strive to build good networks and relationships with internal and external stakeholders because such CEOs have sufficiently adapted to their organizations (Chen et al., 2019). CEOs who no longer need to verify their competencies with stakeholders feel relatively less need to invest in social responsibility activities at the risk of loss.

As such, we argue that the positive relationship between CEO future focus and CSP is weakened by CEO tenure. Since longer-tenured CEOs have a strong commitment to their paradigm, they will be less concerned with building positive relationships with stakeholders. Such long-held paradigms and

indifference to social activities may hamper futuristic CEOs to enhancing CSP.

**Hypothesis 2:** The positive relationship between CEO future focus and CSP is weakened as CEO tenure increases.

### D. The Moderating Role of CEO Proportion of Fixed Pay

According to the agency theory, the compensation structure of the CEO can serve as a check and supervision tool that restrains the CEO from making decisions against shareholder interests (Jensen & Meckling, 1976). In addition, as the risk or incentive effects borne by managers vary depending on the compensation structure, their compensation type is reported as a significant factor in investment decision-making (Cho et al., 2023; Matolcsy & Wright, 2011; Kim et al., 2018). For example, Yu (2018) found that CEO equity incentive in high technology firms decreases investment efficiency.

The compensation of CEOs can be divided into fixed pay (i.e., salary) and variable pay (i.e., bonus, stock options, and long-term incentive plans including restricted stock plans and multiyear accounting-based performance plans). Fixed pay is the minimum compensation managers receive regardless of management performance, whereas variable pay represents additional rewards given to managers on achieving performance standards set by the company (Teti et al., 2017). Theoretically, fixed pay structures are assumed to motivate CEOs' consideration for immediate term performance (Mahoney & Thorne, 2005). Under such structures, CEOs may easily overstate accounting performance in the current period at the expense of a deterioration in longer-run results.

Fixed pay, unlike variable pay, also causes CEOs to make decisions or act to pursue self-interest (Deckop et al., 2006). This tendency is because CEOs with a high proportion of fixed pay can maintain their salaries regardless of the financial or social performance of the company. CEOs with a relatively

high proportion of fixed pay are more likely to be interested in management activities and in building their careers than in social responsibility performance. For example, Oh, Li, and Park (2016) found that CEOs with a high proportion of fixed pay are less likely to engage in corporate social activities because such CEOs profit less from long-term and high-risk investments such as social responsibility activities. On the other hand, longer term variable pay based upon market valuation tends to motivate executives' consideration for CSP (Kane, 2002).

We posit that the positive relationship between CEO future focus and CSP is weakened as the proportion of fixed pay in the CEO pay packages increases. CEOs with a strong future focus prefer longer-term decision-making to participate more actively in strategies that require long-term investment, such as socially responsible activities. However, CEOs with relatively high fixed incomes prefer to increase their career prospects by increasing corporate performance in the short term rather than enhancing CSP that requires long-term investment. Therefore, we hypothesize that CEOs with a strong future focus are likely to promote CSP when he/she have high proportion of fixed pay.

**Hypothesis 3:** The positive relationship between CEO future focus and CSP is weakened by the proportion of fixed pay in the CEO pay packages.

#### E. The Moderating Role of Industry Munificence

Industry munificence refers to the ability to procure sufficient resources necessary for corporate strategic decision makings and growth (Dess & Beard, 1984). Given sufficient capacity and resources that could support a firm to grow, firms in industries with high munificence are able to obtain opportunities for profits and growth (Park & Mezas, 2005). However, scarcity environments choke the managerial process and performance because of insufficient resources and decreased demand (Goll & Rasheed, 2005). Although

firms need more devotion to the analytical effort to understand threats in non-munificent environments, the scarcity of resources leads firms to be averse to risks or changes, and instead focus more attention to self-preservation (Goll & Rasheed, 1997). Aragon-Correa and Sharma (2003) propose that munificent condition increases the opportunity to acquire resources so that a firm can use its capabilities and resources to generate organizational capabilities better than its competitors. McArthur and Nystrom (1991) argue that the relationship between a firm's strategy and performance is more pronounced during times of high levels of industry munificence.

We suggest that the relationship between CEO with a strong future focus and CSP is strengthened by industry munificence. In munificent environments, CEOs with a strong future focus will take a more active stance in investing in social responsibility activities to gain positive corporate reputation and create better relationships with stakeholders by capitalizing sufficient resources. In contrast, when the environments lack munificence, strained resources shift firms' efforts towards strategic decisions prioritizing overcoming such difficulties. Such environmental conditions hinder the tendency of future-focused CEOs to pursue social investments like CSP. We therefore expect that the positive relationship between CEO future focus and CSP is stronger when the industry is highly munificent.

**Hypothesis 4:** The positive relationship between CEO future focus and CSP is strengthened by industry munificence.

#### F. The Moderating Role of Industry Dynamism

Industry dynamism reflects the unpredictability and volatility of changes in an industry (Boyd, 1990; Dess & Beard, 1984). In highly dynamic market, there is frequent changes occur in the organizations within an industry, and increase is experienced in the rate of technological changes and its impact throughout that industry (Finkelstein & Boyd, 1998;

Simerly & Li, 2000). As Wang, Choi and Li (2008) noted, uncertain environment hinder stakeholders from getting precise firm information. Further, in highly unpredictable industries, CEOs struggle to accurately analyze the future stake of the environment as is necessary for strategic decision making.

Based on the above discussion, we posit that the positive relationship between CEO future focus and CSP is weakened by a high level of industry dynamism. In other words, CEOs with a strong future focus are less likely to engage in social activities when the industry is unstable and less predictable. When an industry is highly unstable, it will be more difficult for CEOs with a strong future focus will be find that anticipating the potential effect of their strategic decisions, including CSR engagement, will be more difficult. In addition, in such unstable industries, CEOs' future orientation may be hampered by the difficulty in estimating future income or industry changes. In such situations, CEOs with a strong future focus may concentrate more on firm survival rather than on enhancing CSP.

**Hypothesis 5:** The positive relationship between CEO future focus and CSP is weakened by industry dynamism.

### III. Methods

#### A. Sample

Our sample includes U.S. publicly traded manufacturing firms (i.e., two-digit SIC (Standard Industrial Classification) codes 20 through 39) for the years of 2005 to 2011. To construct our sample, we only include firms have CSP data assessed by Kinder, Lydenburg, Domini (KLD) Research and Analytics. Next, we manually collect CEO letters to shareholders from each firm's website. Next, we collected financial data and board information of each firm from *Compustat*, and *Execucomp* database. Due to the availability of complete data from various data

sources, our final sample consists of 933 (firm-year) observations.

### B. Variables and Measurement

#### 1. Dependent Variable

We measured corporate social performance (CSP) offered by KLD. KLD evaluation of social performance is based on a wide range of data sources, including company survey, expert panel assessment, and public disclosures (Chatterji et al., 2009; Strike et al., 2006). KLD offers assessments of several domains including *Environment*, *Community*, *Diversity*, *Employee Relations*, *Human Rights*, *Product Quality and Safety*, and *Corporate Governance*, and rates each firm along those categories of CSR strengths or concerns. To measure each firm's CSP, we aggregate each strength of year  $t+1$  (Arora & Dharwadkar, 2011; Manner, 2010; Oh et al., 2016).

#### 2. Independent Variable

CEO future focus is measured by using cognitive-linguistic perspective by following existing research (e.g., Desjardine & Shi, 2021; Gamache & McNamara, 2019; Nadkarni & Chen, 2014). Cognitive-linguistic perspective argues that there is a relationship between language and the speaker's mental representations (Hart, 2014). To measure CEO future focus, we conduct the content analysis of the company's CEO letters to shareholders to measure CEO future focus. Since CEO letters to shareholders are the first official communication between newly appointed CEO and shareholders, messages in these letters can be expected to be immensely salient (Fanelli et al., 2009). In addition, a CEO has a fiduciary duty to sign the shareholder letters with full truthfulness and accuracy (Gamache & McNamara, 2019; Kaplan 2008). In this regard, content analysis of CEO letters to shareholders has been widely used in management field (e.g., Crilly et al., 2016; Daly et al., 2004; McClelland et al., 2010; Nadkarni & Barr, 2008; Nadkarni & Chen, 2014).



Consistent with prior research, content analysis of each firm's CEO letter to shareholders is conducted by using the Linguistic Inquire and Word Count (LIWC) software. The LIWC software provides dictionaries to measure an individual's past, present, and future focus. Over the past 25 years, the LIWC dictionaries have been validated for more than 24,000 writers and speakers (Desjardine & Shi, 2021; Nadkarni & Chen, 2014). We measured CEO future focus using the same dictionary developed by Pennebaker, Booth and Francis (2007) in the LIWC software. The dictionary consisted of a set of 48 words that indicate an individual's future focus (e.g., will, expect, potential). The LIWC program tracks each word related to future focus used in a firm's CEO letter to shareholders and calculates the ratio of future focus-related words out of all words written in the letters.

### 3. Moderating Variables

This study has four moderating variables which are CEO tenure, proportion of fixed pay, industry munificence, and industry dynamism. First, *CEO tenure* is the number of years that the individual had occupied the position as CEO. Second, the *proportion of fixed pay* is measured by calculating the ratio of salary to the CEO total compensation (Oh et al., 2016). Third, *industry munificence* and *industry dynamism* are assessed for each industry by using its four-digit SIC code and measured by following Keats and Hitt (1988). We first regressed the natural logarithm of sales for each industry for five years against time. Second, we antilog of the regression slope coefficient to measure industry munificence and standard error to measure industry dynamism.

### 4. Control Variables

Our study includes several control variables might affect CSP which are firm, governance, and CEO characteristics. First, we controlled for *Firm age* because it has potential effects of a firm's experience (Chen, 2013; Wu et al., 2005). Firm age is measured as a number of years a firm has been operated. *Firm*

*size* was also controlled because it has positive effects to CSP ratings (Chang et al., 2012; Manner, 2010). We therefore controlled firm size using the logarithms of total sales. For *Debt ratio*, we calculated a firm's long-term debt divided by its assets. In addition, *slack resources* are included since slack resources allow firm to more actively engage in socially responsible activities (Harrison & Coombs, 2012; Waddock & Graves, 1997). As such, we used level of cash reserves in a given year as a measurement for slack resources (Arora & Dharwadkar, 2011; George, 2005). Since cash is positively skewed, we transformed it logarithmically.

Corporate governance characteristics are known to affect CSP (Johnson & Greening, 1999). Thus, we controlled *board size* and *proportion of outside directors* (Park & Buyn, 2022). *Board size* was measured as the total number of directors on the board. The *proportion of outside directors* was calculated by dividing the number of outside directors by the total number of board members on board.

Previous studies have argued that CEO's demographic characteristics are associated with CSR decisions (Oh et al., 2016). As such, we also controlled CEO characteristics including *CEO gender*, *duality*, *age*, and *past focus*. *CEO gender* was coded as 1 if CEO was a male and 0 for a female. We controlled *CEO age* because younger CEOs are more engage in CSR (Matta & Beamish, 2008; Oh et al., 2016). For *CEO duality*, we created a dummy variable. We coded 1 if CEO is also chairman of the board, or 0 if otherwise. We also include *CEO past focus* by conducting content analysis of CEO letters to shareholder. To measure CEO past focus, we used the set of words list from Pennebaker et al. (2007) and calculate the ratio of target words out of all words written in the letters.

In addition, the *length of letter to shareholder* is controlled because it varies across firms (Yadav et al., 2007). The difference in the length of letters could also cause the difference in the representation of CEO future focus (Desjardine & Shi, 2021). As such, the length of CEO letter to shareholder is included as control variable. It is measured as the number of total words written in each firm's CEO

letter to shareholder, and log-transformed. Lastly, the effects of industry and year are controlled by creating dummy variables. However, we did not report coefficients and standard errors of each industry and year dummy variables.

### C. Statistical Analysis

Our final dataset includes 933 firm-year observations from 178 firms. Since our dataset includes both time-series and cross-sectional components, ordinary least square (OLS) regression analysis is not appropriate. Therefore, we used generalized estimating equations (GEE) model to test our hypotheses. GEE model offers several advantages over random- or fixed-effect model which are usually used in panel data analysis. First, it offers higher robustness coefficient when dependent variable has possibility of auto-correlation (Liang & Zeger, 1986). Second, GEE does not need to assume the normal distribution of the dependent variable (Ndofor et al., 2011). Lastly, GEE analysis has more robustness results than random- or fixed-effect model because it offers multi-matrix structure that fits the best to the dataset (Liang & Zeger, 1986). We further evaluate the multicollinearity problem by examining variance inflation factors (VIFs). The mean VIF value is 2.30 and it range from 1.08 to 3.61. The range of VIFs is far below the 10 which is conventional threshold (Neter et al., 1985), thus we do not have multicollinearity issues.

## IV. Results

Table 2 shows the means, standard deviations, and correlation for the sample.

Table 3 presents the results of GEE regression analysis. As shown in Table 3, Model 1 is the baseline model that includes only control variables. Model 2 shows the main effect of CEO future focus and CSP, testing Hypothesis 1. Hypothesis 1 predicts

that CEOs with a strong future focus are more likely to engage CSP. As shown in Model 2 of Table 3, CEO future focus is positively related to CSP ( $\beta = 0.39, p \leq 0.05$ ). Thus, Hypothesis 1 is supported.

Hypotheses 2 and 3 propose that the interaction effect of CEO characteristics (i.e., CEO tenure and proportion of fixed pay). Hypothesis 2 predicts that the positive relationship between CEO future focus and CSP is weakened by CEO tenure. As shown in Model 3, CEO future focus has positive relationship with CSP when CEO has longer tenure ( $\beta = -0.09, p \leq 0.01$ ). Figure 1 illustrates this interaction and shows that a positive relationship between CEO future focus and CSP only exists when CEO has shorter tenure. Therefore, we find support for Hypothesis 2. Hypothesis 3 predicts that the proportion of fixed pay negatively moderates the influence of CEO future focus on CSP. Model 4 in Table 3 shows the interaction effect of the proportion of fixed pay. As predicted, the result shows that the proportion of fixed pay weakens the positive relationship between CEO future focus and CSP ( $\beta = -0.89, p \leq 0.10$ ). Figure 2 shows that a CEO with a strong future focus less likely to engage in CSR activities when he/she has a higher proportion of fixed pay. Thus, Hypothesis 3 is marginally supported.

Hypotheses 4 and 5 suggest that the interaction effect of environment munificence and dynamism. Hypothesis 4 proposes that the positive effect of CEO future focus on CSP is stronger when the environment is highly munificent. However, as shown in Model 5, we did not find any support for the interaction effect of industry munificence ( $\beta = 1.95, n.s.$ ). Therefore, Hypothesis 4 is not supported. In addition, Hypothesis 5 predicts that the positive relationship between CEO future focus and CSP is weakened by industry dynamism. As shown in Model 6 in Table 3, the interaction between CEO future focus and industry dynamism is negative and significant ( $\beta = -26.47, p \leq 0.05$ ). Figure 3 reveals that a positive relationship between CEO future focus and CSP is weakened when there is a high level of industry dynamism. Therefore, the result provide support for Hypothesis 5.

**Table 2.** Descriptive Statistics: Means, Standard Deviations, and Correlations

Variables	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. CSP	4.87	4.63	1.00																
2. Firm age	84.07	46.71	0.15	1.00															
3. Firm size	8.80	1.12	0.63	0.19	1.00														
4. Debt ratio	0.05	22.93	0.00	-0.00	-0.02	1.00													
5. Slack resources	6.05	1.70	0.52	-0.00	0.58	-0.01	1.00												
6. Board size	2.35	0.17	0.31	0.33	0.39	0.02	0.18	1.00											
7. Proportion of outside directors	0.87	0.06	0.12	0.02	0.13	0.04	0.02	0.11	1.00										
8. CEO gender	0.98	0.16	-0.13	-0.08	-0.17	-0.01	-0.13	-0.01	-0.02	1.00									
9. CEO duality	0.95	0.21	0.04	0.12	0.07	0.01	-0.02	0.02	0.11	-0.04	1.00								
10. CEO age	55.84	5.70	0.07	0.07	0.10	-0.04	0.04	0.06	0.05	0.10	0.04	1.00							
11. CEO past focus	1.74	0.61	0.00	0.08	-0.02	0.02	-0.05	0.03	0.10	0.01	0.08	0.03	1.00						
12. Length of letter to shareholders	7.38	0.47	0.10	0.22	0.18	0.01	0.07	0.16	0.10	-0.06	-0.00	0.01	-0.09	1.00					
13. CEO tenure	6.29	4.32	-0.00	-0.07	-0.03	-0.00	-0.00	-0.03	-0.03	0.02	-0.01	0.38	0.02	0.00	1.00				
14. Proportion of fixed pay	0.86	0.26	0.01	0.07	-0.15	0.02	-0.04	0.01	0.04	-0.05	0.04	0.01	-0.01	-0.08	0.11	1.00			
15. Industry munificence	1.05	0.04	-0.04	-0.02	0.04	0.03	-0.04	-0.05	-0.11	0.03	-0.07	-0.11	-0.06	0.08	0.00	-0.18	1.00		
16. Industry dynamism	1.02	0.01	0.10	0.06	0.02	-0.00	0.08	0.09	0.11	-0.07	0.09	0.14	0.09	-0.12	-0.03	0.16	-0.56	1.00	
17. CEO future focus	1.08	0.47	0.07	0.06	0.05	-0.02	0.04	0.01	-0.00	-0.01	-0.01	-0.01	0.09	-0.08	0.03	-0.07	-0.04	0.02	1.00

Notes: a. Correlations greater than |0.05| are significant at  $p \leq 0.05$  and those greater than |0.07| are significant at  $p \leq 0.01$ .b. Two-tailed coefficient test ( $N = 933$ ).

**Table 3.** GEE regression Analysis on Corporate Social Performance

Variables	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Constant	-14.93***	(3.07)	-46.48***	(13.99)	-48.18***	(13.90)	-48.63***	(14.07)	-45.31***	(14.10)	-79.31***	(19.37)	-107.15***	(24.03)
Firm age	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)	0.00	(0.01)
Firm size	2.48***	(0.20)	2.37***	(0.20)	2.37***	(0.20)	2.37***	(0.20)	2.37***	(0.20)	2.34***	(0.20)	2.33***	(0.20)
Debt ratio	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)	0.00	(0.00)
Slack resources	0.10	(0.07)	0.11	(0.07)	0.09	(0.07)	0.11	(0.07)	0.11	(0.07)	0.11 <sup>†</sup>	(0.07)	0.10	(0.07)
Board size	-0.59	(0.69)	-0.41	(0.68)	-0.41	(0.68)	-0.39	(0.68)	-0.42	(0.68)	-0.34	(0.68)	-0.24	(0.68)
Proportion of outside directors	1.84	(1.54)	1.37	(1.52)	1.47	(1.51)	1.26	(1.52)	1.41	(1.52)	1.28	(1.52)	1.08	(1.51)
CEO gender	0.52	(0.83)	0.52	(0.83)	0.63	(0.82)	0.51	(0.83)	0.53	(0.83)	0.54	(0.82)	0.62	(0.82)
CEO duality	-0.37	(0.37)	-0.48	(0.37)	-0.42	(0.37)	-0.49	(0.37)	-0.49	(0.37)	-0.48	(0.37)	-0.40	(0.37)
CEO age	-0.01	(0.02)	-0.02	(0.02)	-0.02	(0.02)	-0.01	(0.02)	-0.01	(0.02)	-0.01	(0.02)	-0.02	(0.02)
CEO past focus	-0.15	(0.13)	-0.19	(0.13)	-0.22 <sup>†</sup>	(0.13)	-0.19	(0.13)	-0.20	(0.13)	-0.20	(0.13)	-0.22 <sup>†</sup>	(0.13)
Length of letter to shareholders	-0.30	(0.19)	-0.26	(0.19)	-0.19	(0.19)	-0.24	(0.19)	-0.26	(0.19)	-0.26	(0.19)	-0.18	(0.19)
CEO tenure			0.01	(0.02)	0.12**	(0.05)	0.01	(0.02)	0.01	(0.02)	0.01	(0.02)	0.12**	(0.05)
Proportion of fixed pay			0.26	(0.39)	0.32	(0.38)	1.32 <sup>†</sup>	(0.77)	0.26	(0.39)	0.24	(0.38)	1.26 <sup>†</sup>	(0.77)
Industry munificence			17.08***	(3.42)	17.49***	(3.40)	17.21***	(3.42)	14.82**	(4.86)	16.77***	(3.41)	24.74***	(5.66)
Industry dynamism			13.20	(12.01)	13.42	(11.92)	14.15	(12.04)	14.41	(12.15)	45.92*	(17.96)	63.04**	(20.12)
CEO future focus			0.39*	(0.16)	0.96***	(0.26)	1.15*	(0.50)	-1.65	(3.12)	27.34*	(11.04)	52.04**	(17.69)
CEO future focus × CEO tenure					-0.09**	(0.03)							-0.09**	(0.03)
CEO future focus × Proportion of fixed pay							-0.89 <sup>†</sup>	(0.56)					-0.83	(0.56)
CEO future focus × Industry munificence									1.95	(2.98)			-6.58	(4.00)
CEO future focus × Industry dynamism											-26.47*	(10.84)	-42.71**	(14.34)
Wald Chi-Square (d.f.)	494.65(32)***		538.14(37)***		550.26(38)***		541.63(38)***		538.44(38)***		546.01(38)***		565.90(41)***	
Number of observations	933		933		933		933		933		933		933	

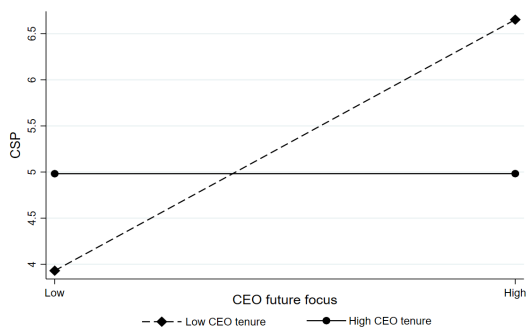
Notes: a. <sup>†</sup>  $\leq .10$ , \*  $p \leq .05$ , \*\*  $p \leq .01$ , \*\*\*  $p \leq .001$   
b. Two-tailed coefficient test; Regression coefficients are unstandardized with standard errors in parentheses.

Lastly, in Model 7, we include four interaction terms two of which are significant. Specifically, the positive relationship between CEO future focus and CSP is weakened when CEO has a long tenure, and there is a high-level of industry dynamism. However, we did not find interaction effect of the proportion of fixed pay, and industry munificence.

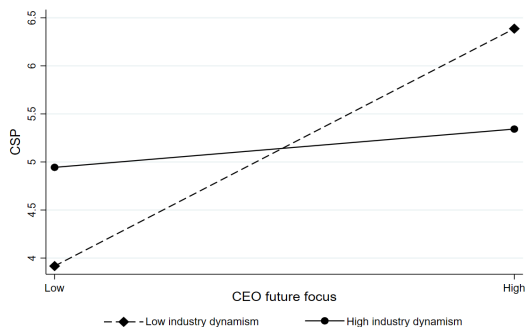
### A. Supplementary Analysis

Since the three dimensions of temporal focus are independent, such that the effect of one dimension

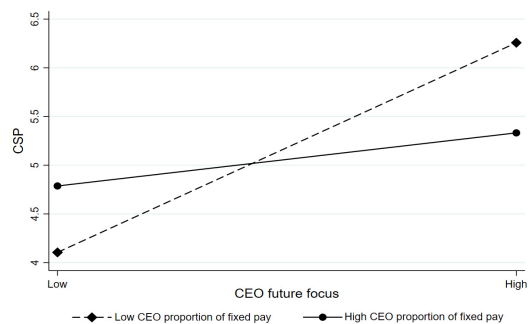
does not have any impact on the other two dimensions (Nadkarni & Chen, 2014; Shipp et al., 2009). This study conducts supplemental analysis to confirm individual's past, present, and future focus are independent. We then used Bonferroni's test to make comparisons of eight possible combinations of (high/low) CEO past focus, (high/low) CEO present focus, and (high/low) CEO future focus. Table 4 shows the result of Bonferroni's test. As shown in Table 4, all pairwise comparisons have significant differences. This finding supports our argument that CEOs' past, present, and future focus are distinct dimensions. Such differences are also plotted in Figure 4. Figure



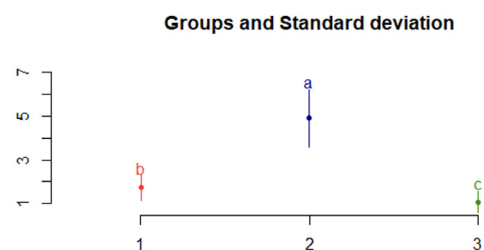
**Figure 1.** Effects of CEO future focus on corporate social performance at different levels of CEO tenure



**Figure 3.** Effects of CEO future focus on corporate social performance at different levels of industry dynamism



**Figure 2.** Effects of CEO future focus on corporate social performance at different levels of proportion of fixed pay in the CEO pay packages



Notes: a: CEO present focus, b: CEO past focus, c: CEO future focus

**Figure 4.** Bonferroni test results

**Table 4.** Result of Bonferroni Test

Group	Difference	p-value
Past focus- Present focus	-3.21	$p < 0.00$
Past focus- Future focus	0.66	$p < 0.00$
Present focus- Future focus	3.86	$p < 0.00$

4 shows that three temporal foci have different standard deviations which also indicates each of temporal focus is independent of others.

## V. Conclusions

### A. Discussion

Behavioral research in strategy has long been concerned about the influences of top executives on major organizational outcomes. Recent strategic management research has examined the direct and indirect effects of CEOs' temporal foci on their cognitive activities and strategic decisions (Desjardine & Shi, 2021; Gamache & McNamara, 2019; Nadkarni & Chen, 2014). Our study extends this stream of research by investigating how CEO future focus impacts CSP.

The empirical results of our study show a few interesting findings. First, we found that CEOs with a strong future focus are more likely to engage in social activities. Future-focused CEOs tend to put their attention on the future and think about long-term goals and future expectations (Shipp & Jansen, 2011). Given the long-term orientation of CSP, our results show that a CEO with a strong future focus is more likely to be looking ahead at possible future gains by enhancing CSP. Second, we also found that various boundary conditions shape the positive relationship between CEO future focus and CSP. More specifically, we found that such relationship between CEO future focus and CSP is weakened when a CEO has longer tenure, when a CEO has a higher proportion of fixed pay in his/her pay packages, and when an organization confronts a shifting and challenging external environment.

Our theoretical arguments and supportive findings can shed light on several streams of research. From the theoretical standpoint, this study extends both the strategic leadership and the CSR literature in that a CEO's temporal foci influence corporate social activities. Although there has been extensive research on the antecedents of CSP, little has addressed the role of CEOs' subjective biases in determining how

future time frames affect CSP. This study fills this gap by focusing on CEOs' future focus and their relationship with CSP and supports the belief that a CEO with a strong future focus makes decisions based on long-term perspectives. This study also suggests that decisions made by CEOs who are trying to increase longer term firm performance, tend to be socially responsible.

The moderating effects of CEO characteristics on the relationship between a future temporal focus and CSP suggest that both CEO tenure and fixed pay proportion attenuate the effects of a future temporal focus on CSP. A CEO's future temporal focus can promote goal-setting, motivation, and achievement strivings (Bandura, 2001; Fried & Slowik, 2004; Zimbardo & Boyd, 1999). As CEO tenure increases, however, the firm will tend to become more inertial thereby resisting external pressures for change (Miller, 1991). We believe that the inertia hinders the effects of CEO future focus on CSP. CEOs will get pressures from various external stakeholders to consider potential costs and benefits of environmental and social factors that may impact firm performance in the long term. CEOs with long tenure have much more power to resist such external pressures and hire and promote people whose views are very similar to their own, thereby homogenizing the organization and institutionalizing their power (Ocasio, 1994). Thus, a CEO with long tenure will become more immune to social performance problems the longer his/her tenure. As a result, those CEOs feel relatively less need to invest in social responsibility activities at the risk of potential economic loss from the investments.

Our findings also contribute to research on the executive-pay interaction model by showing that fixed pay proportion of CEO pay packages and future temporal focus interact to influence corporate social activities (c.f., Desjardine & Shi, 2021; Oh et al., 2016). Because fixed pay structures are to motivate CEOs' consideration for immediate term performance rather than long term performance, they can reduce the positive effects of a future focus on CSP.

In addition, our result shows that the relationship

between CEO future focus and CSP is pronounced under the dynamic industry environment. When an organization faces a shifting and challenging external environment, investing in CSR activities must look riskier decisions. Thus, even a CEO with a strong future focus becomes hesitant to actively engaging in social activities in such a situation.

We believe that our findings are also of value to practitioners. Specifically, our findings can help all stakeholders to better understand and predict a CEO's decisions regarding corporate social activities. What kind of CEOs make more socially responsible decisions is of crucial concern to investors, board members, and other important stakeholders. The results of our study imply that CEOs with future temporal foci tend to improve CSP. Our findings about the moderating effects of CEO tenure, fixed pay proportion of CEO pay packages, and environmental dynamism further extend our primary managerial implications.

## B. Limitations and Future Research Directions

Although our findings have several important contributions, this study is not free of limitations. First limitation is related to the measurement of future temporal focus. Although we considered CEO future focus as an important antecedent of CSP by analyzing CEOs' annual letters to shareholders, the measurement we adopted in this study could not fully capture CEOs' personal traits. Thus, future studies should attempt to develop other instruments to measure CEOs' psychological traits. Additionally, various tools such as in-depth interviews or self-reporting are also necessary.

Second, we only consider CEO future focus rather than the past and present focus. Since prior studies have argued that past, present, and future focus are independent, it is important to note that the distinctive functions of past, present, and future focus have different decision implications for CSP. CEOs might vary in the degree to which they devote attention to the past, present, and future. Thus, we encourage

future studies may investigate the impact of past, present, and future focus on CSP respectively.

Last limitation concerns the sample used in this study. Our samples consisted of firms that large publicly traded in the United States, and thus there is a limitation of generalizing the results of this study. If the sample firms were collected from different countries or industries, the results might be different, given that influence of CEO cognition on CSP may vary. Therefore, future studies should consider different samples from other countries or industries.

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