# Corporate Social Responsibility Performance-Based Incentives: Investigations Through the Lens of Corporate Governance

Leanne Keddie

A Thesis In the John Molson School of Business

Presented in Partial Fulfilment of the Requirements
For the Degree of Doctor of Philosophy (Business Administration - Accountancy)
at the John Molson School of Business at Concordia University
Montréal, Québec, Canada

April 2020

CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared

By: *Leanne Keddie*

Entitled: *Corporate Social Responsibility Performance-Based Incentives: Investigations Through the Lens of Corporate Governance*

and submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY (*Accountancy*)

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the final examining committee:

_____Chair
*Dr. Caroline Roux*

_____External Examiner
*Dr. Thomas Schneider*

_____External to Program
*Dr. Bryan Campbell*

_____Examiner
*Dr. Emilio Boulianne*

_____Examiner
*Dr. Denis Cormier*

_____Thesis Supervisor
*Dr. Michel Magnan*

Approved by _____
*Dr. Cedric Lesage, Graduate Program Director*

Month/day/year _____
*Dr. Anne-Marie Croteau*
*John Molson School of Business*

## ABSTRACT

**Corporate Social Responsibility Performance-Based Incentives: Investigations Through the Lens of Corporate Governance**

**Sara Leanne Keddie, Ph. D.**
**Concordia University, 2020**

Structured around three essays, this dissertation investigates the use of Corporate Social Responsibility (CSR) performance-based incentives through the lens of corporate governance. Toward that end, it relies on both quantitative and qualitative research methodologies. The key data was hand collected from the proxy statements of S&P 500 firms for the fiscal year 2014 while the remaining data was obtained from various databases. Semi-structured interviews were also conducted with key executives and directors and add context to the quantitative results reported in the first paper. Findings reported in the first essay suggest that short-term view institutional shareholders are associated with less use of CSR performance-based incentives while long-term view institutional shareholders, according to the qualitative data only, appear to be working towards greater use. Furthermore, imitation appears to underlie greater use of CSR performance-based incentives. Within the second essay, results are consistent with the notion that when the top management team has power, the use of these incentives is associated with excess compensation beyond what they would normally be expected to receive. Finally, in the third essay, knowledge transfer vis-à-vis directors' experience on CSR committees as well as in environmentally sensitive industries appears to induce firms to expand their use of particular sub-categories of quantitative CSR performance-based incentives. This work contributes to the literatures in executive compensation, CSR, knowledge transfer and to the emerging literature on CSR-driven corporate governance. It will be of interest to boards of directors, regulators, shareholders and other stakeholders interested in understanding more about who is influencing the use of CSR performance-based incentives and how these come into use in a firm.

**Dedication and Acknowledgements**

This thesis is dedicated to my Mom. She may not have lived to see this day, but she inspired my love of learning as a child and that directly lead me here. From teaching me to read to pushing me to question the rules of our society, her love and support are enduring.

This thesis is dedicated to my Grandma. Without her, I would not have been able to pursue my studies. She lived with us after my Mom died and allowed me to take advantage of the opportunities ahead of me. Her kindness and compassion often went against societal rules, but she did it anyways and that is a constant source of inspiration for me.

This thesis is dedicated to my Dad. Our daily chats help me to put the world into perspective and remind me of the blessings that I have. You make me laugh and make sure I never forget where I came from.

This thesis is dedicated to my husband, Jeff. Your encouragement over the last many years has been invaluable as is your willingness to come along on this adventure. My partner in everything, the person who listens to all my wild ideas and theories about the world. Thanks for listening and questioning and pushing me to go on.

This thesis is dedicated to my children: Xavier, Ellis, Cole & Taylor. You inspire me to work towards a better world. Your innocence and pure love bring joy to my life and meaning to my work. Every day you teach me love, patience and the wonder of the world. I love you all bigger than the universe.

This thesis is dedicated to my aunts Mary and Reynelda. Your love, support, constant encouragement and positivity are bright lights for me when things are challenging.

This thesis is dedicated to Fr. Jude. You were one of the first people to suggest a PhD as a possible route for my future. You truly see people and their gifts. Thank you for the love and support you have shown to my family and I and for always pushing us to use our gifts to their fullest potential.

This thesis is dedicated to my family. My brothers, Myles, Paul and Colin, my in-laws Debbie and Harry, Lesley, Taryn, Vanessa, Dan, Tim and Laura, and to all my nieces and nephews Emily, Tyler, Ace, Sky, Callen, Linden, Isla and your new brother to arrive soon. A special thank you to Sarah, William and Delilah for all your incredible support, simplifying my life on way too many occasions. Thank you to all my friends and family who have supported us throughout the years, providing words of encouragement, a smile, a laugh, even a question or a puzzled look as I talked about my work as you politely tolerated me talking about my research. I appreciate your love, support and especially your patience! And to my nieces and nephews I hope you use your gifts to reach for the stars.

This thesis is dedicated to all of my former teachers and professors. You pushed me, you challenged me, you directed me here. My love of learning was nurtured in many of your classrooms and the foundations you helped to build continue to nurture my curiosity today.

This thesis is dedicated to all those who have not had the same opportunities as I have. I will continue to work to open doors for those looking for more and will do my best to use my position of privilege to help others.

I want to thank Dr. Emilio Boulianne for being the first to give me the opportunity to work on a 'real' paper. You are the most incredible cheerleader and your positive attitude, support and amazing feedback shape the researcher I am today.

To Dr. Denis Cormier I also express thanks for your always insightful comments that continue to challenge me to be better. Your work is inspiring, and I appreciate the time you have provided to help make my work better.

I cannot express enough thanks to my supervisor Dr. Michel Magnan. Your constant support, brilliant insights, patience and encouragement were critical for this dissertation. Your insights are always spot on and never fail to push me to think more deeply. I have learned so much over the last number of years and will be forever grateful to have had you as my supervisor.

**Contribution of Authors**

All concepts, ideas, literature reviews, data collection, statistical analyses and writing for this dissertation come from Leanne Keddie. Dr. Michel Magnan provided critical review, commentary and editing on of all the works included herein.

## Table of Contents

**List of Tables**

**List of Figures**

## Introduction

### *1.1. Background*

This dissertation explores the use of Corporate Social Responsibility (CSR) performance-based incentives through the lens of corporate governance. The research is motivated by a sincere desire to have a greater understanding of how firms can 'be better' in society. As this dissertation was being developed, interest in CSR continued to grow. Protests over climate change and its implications for the most vulnerable in society have drawn thousands into the streets (BBC, 2020). While human society as we know it faces some unprecedented challenges regarding its future, executive compensation is also at all-time highs with levels having risen from 20-30 times the wages of the average worker in the 1970s to between 200 and 300:1 today (Baker, Bivens & Scheider, 2019). Calls are growing louder for businesses to step up and contribute more positively to society, essentially to improve their CSR performance as well as their sustainability. These calls are no longer from the 'fringe'. In fact, Larry Fink, CEO of BlackRock, the world's largest asset manager with over $7 trillion in assets under management, has taken the opportunity in each of the last four years to call on businesses to contribute more to society (Centre on Executive Compensation, 2017; Fink, 2018; Fink, 2019; Fink, 2020). The shareholder primacy façade is fading away and a broader, more inclusive and holistic view of the firm is emerging (Stout, 2012). As such, the intersection of these seemingly disparate areas may be colliding and pushing firms to innovate and deal with these pressures accordingly.

This dissertation draws its main inspiration from four key papers: Kolk & Perego, 2014; Hong, Li & Minor, 2016; Maas, 2018; and Flammer, Hong & Minor, 2019. To the best of my knowledge, Kolk & Perego (2014) are the first scholars to describe the use of 'sustainable bonuses'. The authors examine four firms and provide a good introduction to the topic highlighting the emerging nature of these incentives as well as posing interesting possibilities for future research. They note that it is too early to tell if these bonuses have a substantive impact or are just window dressing. Hong, Li & Minor (2016) investigate the use of these incentives and find that they are associated with shareholder friendly boards. They contribute to the debate as to whether CSR initiatives are positive or negative for shareholders and find that CSR performance-based incentives are in fact positive for shareholders. Maas (2018) delves deeper into the use of these incentives by exploring whether firms with past poor CSR performance are more likely to use such

incentives and finds they are not. Additionally, to the best of my knowledge, Maas (2018) is the first scholar to break down these incentives further into what she deems to be 'hard' or quantitative, explicit metrics and 'soft' or qualitative metrics. She finds that only hard, quantitative metrics are associated with a positive effect on CSR performance while soft, qualitative incentives are not. Her work heavily influences my work by considering that not all CSR performance-based incentives are homogenous, and that we need to break these down further to understand the determinants, and eventually, the performance implications. Finally, Flammer, Hong & Minor (2019) consider whether these incentives are used to align executives' preferences with shareholder preferences. Specifically, they conclude that shareholders would prefer executives to focus on particular stakeholders and use these incentives to ensure this.

These four papers are some of the first to explore the use of CSR performance-based incentives and open the door to additional questions. I aim to extend such seminal work on the issue of CSR-based incentives by examining further determinants and implications, thus contributing to an ongoing conversation. Each of these papers enhances our understanding and pushes our knowledge further about the use of these incentives. I continue this work here by exploring the use of CSR performance-based incentives from a corporate governance perspective. Specifically, each paper takes a different view of the use of these incentives and attempts to understand who is influencing their use and how this may occur. In considering a firm's usage of CSR performance-based incentives, the dissertation papers explore whether this usage may stem from: 1) pressure from heterogenous shareholders or peer pressure, 2) management and 3) knowledge transfer from the board of directors. My work directly extends the work of the aforementioned papers by investigating three distinct determinants for the use of CSR performance-based incentives.

To ensure mutual understanding of this dissertation, it is important to establish some critical terms before proceeding any further. I take a triple bottom line approach to CSR which includes the social, environmental and financial aspect of the firm (Elkington, 1997). The CSR performance-based incentives themselves are, for the purposes of this study, found in the short-term incentive plan, typically paid in cash and usually paid for performance within the previous year. I use dummy variables for the first two papers whereby a 1(0) indicates the presence (absence) of some form of social and/or environmental metric in the executive compensation plan for the top management team. In the third paper, I break this down further and, like Maas (2018),

consider whether the metrics are 'hard' or 'soft' but also what category the metric falls into. To define 'hard' metrics I employ two definitions. In the first, I include only those metrics where there is an explicit, quantitative goal in the incentive plan (e.g. 10% of the bonus is allocated to achieving a safety goal of less than 1 accident per 1000). I refer to this as the restrictive 'hard' definition. Over the course of reviewing the proxy statements for the CSR performance-based incentives, I noticed that there were many gradients of use. Consequently, I use a second, more general definition of hard since a number of firms have what I deem to be 'modifiers' to the short-term incentive plan. For example, the main breakdown of the bonus may have been financial but a modifier of 10% may be added for achieving specific social and/or environmental goals. In these cases, achievement of 100% of the financial goals and of the 'modifier' social and/or environmental goals, would result in a bonus of 110%. Additionally, in the third paper, I use dummy variables to code whether the metric is only social in nature (e.g. diversity, safety), only environmental in nature (e.g. water use, greenhouse gas emission reduction) or a combination of both social and environmental metrics.

### *1.2. Value*

Firms are being increasingly called upon to address their role in climate change, growing inequality, and how they contribute positively to society. The climate crisis, and its effect on society and the environment, is growing every day. CPA Canada advises that it will affect all aspects of the firm and should not be ignored by boards of directors (Keyes & Willis, 2017). Mark Carney, former Governor of the Bank of Canada, warns that various assets are at risk of becoming worthless as the impact of the climate crisis is felt (Thomson Reuters, 2019). The SEC continues to move towards greater levels of regulation in this area requiring increasing disclosures for firms (SEC, 2016) while shareholders continue to move funds into Sustainable Responsible Investing (SRI) assets at record rates (The Forum for Sustainable and Responsible Investment, 2017). Shareholders continue to engage in proxy fights with social and environmental issues at the forefront (The Conference Board, 2014).

Corporate governance is a critical area of current research. While even the definition of corporate governance is hotly contested (Brickley & Zimmerman, 2010), a broad definition comes from The Cadbury Report (1992) which describes it as "the system by which companies are directed and controlled" (p. 15). As such, societal demands for change must, arguably, be

implemented through the corporate governance system of the firm. Here, I examine one key tool of the corporate governance system: executive compensation. Additionally, I explore how other aspects of the corporate governance system interact with executive compensation, namely heterogenous shareholders and the board of directors, including its sub-committees. Executive compensation itself is an area that continues to be of interest to society in light of growing inequality and the fast rise of executive compensation in comparison to the pay of the general public. Initiatives like 'Say on Pay' have been put in place to help shareholders have a stronger voice on the compensation plans of management, but more work is left to be done.

With so many important issues arising that affect the well-being of society, and business playing such a potentially large role in these issues, studying the who, what, when, where, why and how firms engage with these issues is critical. A large number of firms are now providing CSR performance-based incentives and it is important for us as a society to understand if such incentives are effective, how they are being put in place within a firm, their effects, and who is playing a role in their use. Optimistically, if implemented appropriately, CSR performance-based incentives can help firms to address their role in climate change and deal with key social and environmental issues and impacts caused by the firm. Pessimistically, these incentives may be completely ineffective and just another exercise in greenwashing. This dissertation attempts to understand who is influencing the use of CSR performance-based incentives and how they are coming to be in managerial incentive plans. This contributes to the base of knowledge on such incentives so that, in the future, we can be more clear on the role these incentives may (or may not) play in dealing with these issues of great societal concern. Given the dearth of research in this area, this dissertation provides significant value by greatly expanding our knowledge of CSR performance-based incentives.

### *1.3. Research Aims and Objectives*

This dissertation aims to further our understanding, in particular the determinants, of the use of CSR performance-based objectives. To this end, I pursue three broad research questions:

1. Who is influencing the use of CSR performance-based incentives?
2. Are top management teams influencing the use of CSR performance-based incentives as a way to obtain excess compensation?

3. Does knowledge transfer from the board of directors affect a firm's use of CSR performance-based incentives?

The first question is examined in the essay entitled 'Succumbing to the Pressure? An Investigation of the Influence of Stakeholder Power on CSR Performance-Based Incentives Use'. Here, I use stakeholder power and efficient contracting theories to understand the question at hand. Stakeholder power posits that various stakeholders, such as peers, short-term view institutional shareholders or long-term view institutional shareholders, will influence the use of CSR performance-based incentives. Efficient contracting postulates that the executive contracts are efficient and, consequently, there should be no effect by various stakeholders on the use of CSR performance-based incentives in the executive compensation contract. The sample contains firms in the S&P 500 for the year 2014. I hand collect the data from the 2015 proxy statements that detail the use of CSR performance-based incentives in the short-term incentive plan for the 2014 year. I use logistic regression with the presence or absence of the CSR performance-based incentives as a dummy variable (*CSR_INC*). To provide further texture to the results, I interview six key directors and executives with knowledge of such incentives.

The second question is examined in the essay entitled 'Who Is More Powerful: The Board Or Management? Exploring The Relationship Between CSR Performance-Based Incentives And Executive Compensation'. Here, I use managerial hegemony/organized hypocrisy and efficient contracting theories to understand the question at hand. Managerial hegemony suggests that top management teams use their power to influence the executive compensation contract in order to obtain extra benefits for themselves. This is consistent with organized hypocrisy which outlines that top management teams may undertake initiatives that appear on the surface to 'be good' while at the same time acting in a hypocritical manner. Here, this is represented by the use of CSR performance-based incentives which, on the surface, appear to address the social and/or environmental impacts of the firm however, if top management teams are obtaining excess compensation, this can be seen as hypocritical. Efficient contracting, as in the first essay, postulates that the compensation contracts are efficient and therefore no excess compensation should be obtained by the use of CSR performance-based incentives. As with the first essay, this work relies on the same sample of firms from the S&P 500 for the year 2014. The hand collected data from the 2015 proxy statements details the use of CSR performance-based incentives in the short-term incentive plan for the 2014 year. I use linear regression with excess compensation as

the dependent variable (*EXCESS_COMP*). Excess compensation is determined by splitting firms into their Fama-French industry categories (12), then splitting by quintile and determining the median bonus in each industry/quintile category. The difference from the median by firm becomes the excess compensation when it is above the median.

The third, and final question, is examined in the essay entitled 'The Board of Directors and CSR Performance-based Incentives: What's the 'Link'?' Here, I use an information asymmetry reduction and organized hypocrisy approach to understand the question at hand. The information asymmetry reduction approach follows recent work that suggests that directors share knowledge across committees and through experience. This suggests that directors sitting on board committees such as the CSR committee and executive compensation committee, or those with experience in environmentally sensitive industries, may bring this knowledge together to influence the use of CSR performance-based incentives in those firms. Contrasting this perspective is organized hypocrisy which suggests that directors, and the associated CSR committees, may simply be for show. In this case, knowledge transfer should have no effect on the use of CSR performance-based incentives. As with the first two essays, this work relies on the same sample of firms from the S&P 500 for the year 2014. Here however, I break down the hand collected CSR performance-based incentives data further into sub-categories. Specifically, I use dummy variables to code the incentives used as hard or soft (quantitative and specific or qualitative and vague) and whether the firm uses only social performance-based incentives, only environmental performance-based incentives or both. I use logistic regression with the presence or absence of each type of incentive as the dependent variable (hard/soft, social, environmental or both).

**Succumbing to the Pressure? An Investigation of the Influence of Stakeholder Power on CSR Performance-Based Incentives Use**

**Acknowledgements**

The authors wish to thank the participants of the Accounting Ethics Symposium (April 20-21, 2017), the Groupe de recherche en finance responsable (GREFA) (May 25, 2018), the 7th Centre for Social and Environmental Accounting (CSEAR) North America Congress (June 21-22, 2018) and the Rethinking Responsibility: Agents and Structures conference (December 6-7th, 2018) for their insightful comments. They would also like to thank Mark Anthony De Luca for his helpful research assistance. Additional appreciation is expressed for the significant insights from Denis Cormier and Emilio Boulianne. This research was supported by the Fonds de recherche Société et Culture (FRQSC), a Bertram Scholarship from the Canadian Foundation for Governance Research (CFGR), the Stephen A. Jarislowsky Chair in Corporate Governance and the Institute for the Governance of Private and Public Organizations.

**Abstract**

Many leading firms now use Corporate Social Responsibility (CSR) performance-based incentives, i.e., bonuses tied to social and environmental metrics, in their executive compensation contracts. Such a practice reflects a relatively recent trend. Broadly speaking, CSR refers to various voluntary initiatives targeting a firm's different stakeholders. However, despite their increasing use, there is scant knowledge about CSR performance-based incentives and their determinants. In this study, we investigate why firms are utilizing these incentives; we hypothesize that firms respond to stakeholders' pressures. Toward that end, we rely on a conceptual framework that implies a causal relationship between corporate governance and CSR performance. We hand collect incentive information from the Compensation, Discussion and Analysis (CD&A) sections in the proxy statements for firms in the S&P 500 Index. We then examine how short-term and long-term view institutional shareholders as well as industry competitors affect the use of CSR performance-based incentives by a given firm. Results are consistent with imitation in that firms feel pressure to copy their peers in adopting CSR performance-based incentives. Conversely, those firms with higher levels of short-term view institutional shareholders feel pressure not to integrate CSR performance-based metrics into executive compensation contracts. Interviews with board members and executives provide further context to these findings. To the best of our knowledge, this is the first paper to illustrate how stakeholder power affects the use (or not) of CSR performance-based incentives, thus contributing to both the executive compensation and CSR literatures.

Keywords: Corporate social responsibility; executive compensation; annual incentive plan; corporate governance; stakeholders; institutional investors; shareholders.

## 1. Introduction

Since the 1990's, there is a trend toward the use of non-financial performance metrics in corporate executive compensation packages (inter alia Ittner et al., 1997). The rationale underlying the use of such metrics is their capability to serve as advanced or leading indicators of a firm's future financial performance. Therefore, their integration into executive compensation contracts steers management's attention toward areas and actions that will ultimately translate into enhanced shareholder value (Kaplan, 2009). What appears to be changing as of late is the rise of Corporate Social Responsibility (CSR) performance-based metrics in executive compensation contracts (here forth CSR performance-based incentives) by which firms indicate an explicit, causal relationship with CSR performance.

Findings vary about how common CSR performance-based incentives are, with ranges suggesting that between 24% and 43% of firms link executive compensation to CSR performance (Ceres, 2018; IRRC & Sustainable Investments Institute, 2013). In fact, of the 100 large sustainable firms ranked by Corporate Knights, 87% have some type of executive compensation based on CSR performance (Corporate Knights, 2016). Thus, it appears, at least anecdotally, that the rate of use of CSR performance-based incentives is increasing over time.

In that context, we focus on two research questions 1) why firms are utilizing CSR performance-based metrics in their executives' incentive plans? and, 2) who is influencing this process? We hypothesize that various stakeholders exert their power to influence the outcome of the contracting process; this is done in an attempt to influence the firm with their own objectives in mind. Such an outcome is inconsistent with the efficient contracting perspective which dominates executive compensation theory and practice. As Murphy (2012) notes, an efficient contract is one that reflects market equilibrium for compensation and optimizes firm value. Evidence of inefficiency will be apparent if power is used to alter the contract to one or more stakeholder's benefit. It is possible that institutional shareholders are exerting power to influence the time horizon of management to their own self-interest: long-term institutional shareholders will prefer long-term time horizons while short-term institutional shareholders will prefer short-term time horizons. Power is anticipated to be exerted through relative voting rights in these cases. CSR performance-based incentives serve as a motivator to focus management on longer term

issues. Additionally, pressure from a firm's peers may push them to adopt such incentives where many in their industry are doing so.

The sample comprises S&P 500 firms (487 distinct firms). The CSR performance-based incentives information is hand collected for the performance year 2014 from the Compensation Discussion & Analysis (CD&A) section of the 2015 proxy statements. This is combined with data from the Bloomberg, Execucomp, FactSet, BoardEx and Compustat databases to gather appropriate firm, ownership and board feature information. Additionally, interviews with key corporate and investor actors provide further texture to some of the findings.

Results suggest that short-term view institutional investors pressure boards not to use CSR performance-based incentives. Furthermore, the use of such incentives is significantly driven by imitation. This finding adds to the growing evidence that the efficient contracting perspective on its own is not sufficient to understand the executive compensation setting process. Interviews provide some additional background in documenting that investors' horizon preferences, as well as peer pressures, influence the use of CSR performance-based incentives.

We contribute to the executive compensation and CSR literatures by examining why firms use CSR performance-based incentives and by exploring the underlying corporate governance mechanisms at work. To the best of our knowledge, this study is the first to examine the stakeholders' influence on directors' decision to use CSR performance-based incentives in executive compensation contracts. This novel theoretical extension of efficient contracting suggests that stakeholder power influences boards' selection of performance metrics for executive compensation contracts, thus moderating the executive compensation setting process. Specifically, we extend the recent work by Flammer, Hong & Minor (2019) who explore the use of CSR performance-based incentives as a way to align shareholders' preferences with that of management; we do this by considering the influence of how non-homogenous shareholders and peer stakeholders influence the compensation setting process with regard to these incentives. Additionally, this work extends the research of Maas (2018), Grabner, Renders & Yang (2016), Hong, Li & Minor (2015) & Abdelmotaal & Abdel-Kader (2016) who have all examined some of the determinants of the use of such incentives. Second, we extend the corporate governance literature into the determination of an emerging set of CSR-based metrics in executive incentive plans, particularly in the bonus plan (Guay et al., 2017). Practically, our research provides evidence that could have policy implications for regulators looking to better regulate the use of

CSR performance-based incentives, as well as for shareholders and other stakeholders looking for a better understanding of why such incentives are being used and who is influencing the process.

## 2. Board Governance Under Pressure

A firm's legal context affects the responsibilities that are assigned to its board of directors. Recent court rulings have reaffirmed that shareholder primacy and maximizing shareholder value need not be the sole driving factor supporting the guidance and oversight of the board of directors. For instance, the Supreme Court of Canada (2008) reiterated that the board of directors owes its duty to the corporation itself and this requires consideration of stakeholders beyond shareholders. In the U.S., a majority of states have also enshrined constituency statutes or director's duties laws (Karpoff and Whittry, 2015) which direct the board to consider all of a firm's stakeholders and not just shareholders. Consequently, boards of directors find themselves navigating through demands from a variety of stakeholders. From global warming to executive compensation scrutiny, directors must determine how to handle a range of stakeholders in a dynamic environment.

### *2.1. The climate crisis*

The climate crisis is a key risk for firms today; changes to firm strategy, operations and corporate governance are anticipated as a direct result. CPA Canada advises boards of directors that "climate change is a pressing global issue affecting all companies, public and private, with wide-ranging implications for shareholder value, strategy, risk management and financial performance" (Keyes & Willis, 2017). The scientific community has reached consensus: human activity is causing climate change, and this is a major concern for business (World Economic Forum, 2018). Recently, the Canadian government announced a pan-Canadian framework including a minimum price on carbon (Tasker, 2016). In an end-of-year interview, Mark Carney, who is to step down as Governor of the Bank of England to become the United Nations envoy on climate change, argued that the assets of several financial institutions may become worthless in the medium-term future as some of their clients see their business impacted by the climate crisis (Thomson Reuters, 2019). Such expected consequences contribute to make the social and environmental implications of global warming a major issue for boards of directors.

Many firms had already been pricing carbon in their investment evaluations anticipating such a move, including Royal Dutch Shell, which advised it would conduct more active screening of investments to reduce its carbon footprint. To facilitate this, the firm is incorporating GHG emission reduction goals in its executive compensation contracts (Appendix 1) (Royal Dutch Shell, 2016). Its bonus plan allocates 20% of the metric weighting to sustainable development goals for 2016 including rewards for achieving safety objectives (social), as well as minimizing environmental spills and reducing energy and water usage (environmental). The bonus is significant, representing 29% of the CEO's total compensation for 2016. To understand how such metrics came to be in the executive compensation contract, it is critical to explore the environment the board finds itself in today.

### *2.2. Increasing regulatory pressure*

The SEC continues to press firms on global warming by requiring disclosure on climate change risks particularly as evidence suggests that analysts rely on this information (Cormier and Magnan, 2015). For instance, in February 2010, the SEC released its guidance on the disclosure of climate change information (SEC, 2010). It stated that firms must disclose material information related to the costs of complying with environmental laws, the risks a firm faces in relation to climate change or how changes in GHG regulation may affect the firm. This guidance has resulted in a more than doubling of climate change disclosures by companies although there has been a slight drop in the last couple of years (Harrast & Olsen, 2016). In April 2016, the SEC began seeking input to modernize its disclosure requirements (SEC, 2016). It remains to be seen what, if any, changes will be made to the disclosures provided by firms, but climate change and the associated risks remain on the forefront of many investors' minds as well as the SEC. In Canada, the Canadian Securities Administrators recently reinforced and extended its guidance on environmental reporting to encompass climate change disclosures, highlighting the responsibilities of the board of directors and management in this regard (CSA, 2019).

### *2.3. Dynamic competitive landscape*

From advancements in artificial intelligence to disruptive new business models like UBER, no business is immune from sudden, dramatic change. This necessitates close monitoring of competitors' activities (Birshan, Gibbs, & Strovink, 2014). Corporations monitor their

competitors' developments and change their own behaviour accordingly. For example, Durnev and Mangen (2009) find that firms change their investment decisions based on their competitors' restatements. This indicates that information published by firms has a tangible effect on competitors' own actions. Boards need to be aware of the latest changes in their industries, including how firms are responding to social and environmental issues, and respond accordingly.

### *2.4. The changing shareholder*

It is estimated that institutional investors own upwards of ⅔ of the outstanding shares of U.S. listed firms (Vollmer, 2011). This affects who the board engages with on various governance and strategy issues. Institutional shareholders have the means and expertise to push firms for specific changes in corporate governance, reducing the traditional power held by boards. At the same time, investors are increasingly looking for investment options that reflect their values and Sustainable Responsible Investing (SRI)[1] has grown dramatically in response. It is estimated that $8.72 trillion, or 21.6% of all assets under management in the U.S., are invested in SRI assets (The Forum for Sustainable and Responsible Investment, 2017). Well aware of these trends, Laurence Fink, founder and Chairman of BlackRock, the world's largest investment company, recently issued a letter to CEOs calling on them to address climate change and to become more sustainable (Fink, 2018). Organizations need to address issues of interest to these institutional shareholders or risk suffering the consequences. Firms that do not will find themselves penalized: Griffin, Lont and Sun (2017) report evidence that investors incorporate GHG emission information into their valuation, imposing an equity discount on firms of roughly $79 per ton.

McCahery, Sautner and Starks (2016) find that 63% of institutional investors engage directly with management about their issues while 45% engage with the board of directors without management present. Where private negotiations fail, public proxy fights emerge alongside the rise of shareholder activism. According to The Conference Board: "proposals on social and environmental policy issues…represented the single most frequent subject of resolutions filed in the S&P 500 (249 proposals or 43 percent…) and constituted more than one-third of the total submitted at Russell 3000 companies (288 proposals, or 38.3 percent)" (2014, p. 5). For example, in 2015, the New York State Common Retirement Fund submitted a shareholder proposal to

[1] Schueth (2003) defines SRI as "the process of integrating personal values and societal concerns into investment decision-making" (p. 190).

ExxonMobil requesting additional climate change information (DiNapoli, 2017). ExxonMobil sought to omit the proposal, but the SEC rejected this request and the proposal eventually found support from 62.3% of shareholders in 2017. ExxonMobil agreed to comply.

Concurrently, there is also increasing attention being paid to executive compensation. From Say on Pay to pay equity and inequality, stakeholders are speaking up against what they see as 'inefficient', or unfair executive compensation contracts. For instance, Mylan's shareholders voted against the firm's executive compensation plan, and a number of its institutional shareholders advised their clients to vote against the re-election of directors (Nocera, 2017). Stakeholder values are changing, demanding greater justification of pay packages provided by the board and they are willing to act when their voices are not heard.

Two areas where the board of directors can address these issues are within CSR initiatives and executive compensation. Consequently, CSR performance-based incentives in the executive compensation contract may be the result of the convergence of these numerous pressures felt by the board. By integrating CSR performance-based metrics into executive compensation contracts, boards may be simultaneously addressing stakeholder's CSR demands or succumbing to competitive pressures while also providing a palatable justification for the level of executive compensation provided.

## 3. Literature Review: CSR Performance-Based Incentives and Executive Compensation

### *3.1. Performance metrics and executive compensation*

The design of most executive compensation contracts comprises the same basic elements: base salary, annual incentive plan (usually paid in cash), a long-term incentive plan (usually paid in options, stock or stock equivalents), a pension plan (either defined benefit or defined contribution) and other benefits and perquisites. A key component of the annual incentive plan is the design of incentive targets to be achieved by management on an annual basis. While much of the literature is dedicated to exploring the use of equity incentives in executive compensation, the incentive provided by executive bonus plans is not to be ignored. Murphy (2012) notes that for an incentive to be effective, an individual must be able to reasonably connect their actions with the outcome that will provide the payoff; combine this with the immediacy of the cash payment of the annual incentive plan and you have the potential for a very strong behavioural motivator. Edmans,

Gabaix and Jenter (2017) note that bonus plans have historically been dominated by financial metrics such as earnings per share or sales. Focusing on financial performance measures has traditionally made sense given the attempts to align management behaviour with the perceived primary stakeholder: shareholders. However, De Angelis and Grinstein (2015) examine the S&P 500 for the year 2007 and find that almost 40% of firms offer some form of non-financial performance-based measure; these cash performance awards are typically twice the size of salary and typically use between two and four different metrics.

While De Angelis and Grinstein's work explores performance measures more generally in the compensation contract, our focus is the renewed attention to executive bonus plans. While there is a long-line of literature examining the use of equity-based compensation within the executive compensation literature, interest in bonus plans has been lacklustre (Core et al., 2003). Guay, Kepler and Tsui (2017) re-investigate the use of bonus plans, given that much of the previous research dismisses it as somewhat irrelevant, and set out to ascertain why boards still grant cash bonuses if they serve no purpose. The authors find that bonus plans serve an executive's liquidity needs and are an important incentive particularly early in their career. However, the authors focus only on earnings-based metrics for their study (ibid).

### *3.2. CSR performance-based incentives in executive compensation*

Given the noted pressure boards face, it is perhaps not surprising that they have responded by incorporating CSR performance-based incentives in the executive compensation contract. To date however, our knowledge of these incentives is limited. While there is a line of literature that examines the use of non-financial metrics in executive compensation contracts (inter alia Ittner et al., 1997), these metrics are typically examined in relation to financial performance. By providing executive compensation incentives with a specific tie to CSR performance, it appears that firms are aligning these metrics to a perceived definition of sustainability; typically this definition includes financial, social and environmental metrics (Elkington, 1997).

Kolk and Perego describe sustainable bonuses as "the practice of linking (components of) compensation packages and incentive plans to non-financial dimensions of sustainability performance" (2014, p. 2). This may be an evolution of the non-financial metrics that grew in part from the creation of the Balanced Scorecard, serving as a way to include causal factors into the incentive plans of management. One of the key differences between the two categories of metrics,

strictly non-financial metrics and those relating to CSR performance, may be the consideration of broader stakeholder concerns.

Maas & Rosendaal (2016) provide descriptive evidence of current international CSR performance-based incentives plans. They find that most of the targets relate to the social aspect of CSR, are short-term (less than 1-year) and are related to the energy and utility industries (ibid). Using a case study of four firms, Kolk & Perego (2014) examine the verifiability and controllability of CSR performance-based incentives plans as well as how the targets are categorized from short-term to long-term. They find that it is too early to tell if these incentives are a form of window-dressing or real initiatives to improve CSR performance (ibid).

The literature on CSR performance-based incentives is beginning to investigate some of the reasons why a firm may use CSR performance-based incentives and what the determinants of these incentives are. A handful of papers explore this, reasoning that: 1) firms put CSR performance-based incentives in place in response to previous poor CSR performance, 2) firms are using CSR performance-based incentives as a way to mitigate agency conflict between managers and shareholders, 3) CSR performance-based incentives are used as a complementary disclosure mechanism geared towards shareholders and 4) firms use CSR performance-based incentives to improve financial performance.

Maas (2018) reasons that firms offer CSR performance-based incentives to compensate for previous poor sustainability performance. However, she finds that this is not the case. In fact, firms with either good or poor previous CSR performance use CSR performance-based incentives, effectively ruling this out as one of the reasons why firms adopt such initiatives. Flammer, Hong & Minor (2019) propose another reason, i.e., that shareholders' preferences differ from management's preferences when it comes to which stakeholders to focus on. As such, the authors argue, this leads to an agency conflict between the managers and the shareholders as managers find it in their own best interest to focus on a different set of stakeholders. As a result, CSR performance-based incentives are used to align the preferences of the shareholders with that of management. The authors find that the adoption of such incentives reduces short-termism by managers and increases firm value supporting their hypothesis; they also find evidence that the adoption of these incentives improves CSR performance, reduces emissions and increases green innovations.

Grabner, Renders & Yang (2016) find that CSR performance-based incentives and CSR disclosure are complementary initiatives that serve as a communication mechanism to provide information to stakeholders. They find that those firms with greater CSR disclosure are more likely to provide CSR performance-based incentives. Furthermore, Hong, Li & Minor (2015) find that firms contract with executives using CSR performance-based incentives to increase financial performance. Hong et al. (2015) also find that firms with short tenure directors, more block-holder owners and positive existing CSR performance are more likely to provide CSR performance-based incentives in executive compensation contracts. In addition, research finds that the adoption of CSR performance-based incentives is associated with firm size, compensation committee independence, the presence of a sustainability committee, resource efficiency policies, presence on a sustainability index and a positive effect on shareholder returns (Abdelmotaal & Abdel-Kader, 2016).

## 4. Theory and Hypotheses Development

### *4.1. Perspectives on executive compensation determination*

There are two dominant theoretical approaches used in the executive compensation literature: the managerial power approach and the efficient contracting approach (Frydman and Jenter, 2010; Murphy, 2012). On the one hand, it has been argued that board members are captured by CEOs looking to enhance their own pay: the managerial power approach. On the other hand, efficient contracting argues that market forces dominate, and that executive compensation is designed to maximize firm value (ibid). The literature highlights that the competing nature of the research using these two theories has not been productive, as neither one on its own appears sufficient to explain executive compensation. Other political factors and influences are effectively ignored by both camps (ibid).

Optimal or efficient contracting implies that "the observed level and composition of compensation reflects a competitive equilibrium in the market for managerial talent, and that incentives are structured to optimize firm value" (Murphy, 2012, p. 1). This perspective is often adopted by financial economists as noted by Bebchuk and Fried (2006) and assumes an arms-length approach by the board in setting the executive compensation contract for management on

behalf of shareholders. This agency theory derived perspective remains popular and is widely applied in executive compensation research. In this regard, Core, Guay and Larcker (2003) state:

> "we follow a traditional agency-theory framework and define an efficient contract as one that maximizes the net expected economic value to shareholders after transaction costs (such as contracting costs) and payments to employees. An equivalent way of saying this is that we assume that contracts minimize agency costs" (p. 27).

Although this perspective is widely utilized, it is not completely understood; Eisenhardt (1989) outlines that the principal-agent stream of research within agency theory assumes that "principals and agents will choose the most efficient contract, although efficiency is not directly tested" (p. 69).

This idea is picked up by Martin & Magnan (2017) who discuss the lack of rigorous definition of 'efficient'. They highlight that executive compensation levels have not risen in a corresponding manner to GDP. In fact, top executives have been able to obtain a greater share of corporate earnings without clear evidence that this has created additional value. Thus, the argument of pay for performance does not appear to hold. This is the crux of one of the key opponents to the efficient contracting perspective: the managerial power/hegemony arguments put forth by Bebchuk and Fried (2006). This weakens the assumption that contracts are in fact efficient and tied directly to firm value and value creation.

Sur, Magnan and Cordeiro (2015) attempt to understand some of these multiple levels of influence on the executive compensation process. In their paper, the authors conduct a multi-level analysis that includes agency, managerial hegemony and institutional pressures. By considering that firms benchmark compensation practices to peers, the authors include this new institutionalization perspective finding it does indeed affect executive compensation. This finding helps to explain why certain executive compensation practices spread even despite a lack of evidence of effectiveness or specific firm-relevance (ibid). By following their peers, firms succumb to institutional pressures to increase pay levels and follow the 'latest' compensation trends.

### *4.2. Efficient contracting…modified*

Efficient contracting, it is argued, is desired by all stakeholders as it should maximize the value to all parties. Since value creation for all parties is hard to assess, the focus is typically put

on shareholder value creation, the explicit assumption being that value maximization for shareholders is ultimately consistent with value maximization for all stakeholders. However, since shareholders may have different interests and time horizons, and considering it is difficult for shareholders to engage in collective decision-making, the effective governance of the firm is delegated to the board of directors. The board's key tasks are to monitor and advise management so that the latter makes decisions that translate into long-term value creation (e.g., Brickley and Zimmerman, 2010). In that context, a key corporate governance tool utilized by the board of directors to align management's interests with those of shareholders, and steer them to take appropriate actions, is executive compensation.

We propose that the compensation contracts are not 'efficient' but rather reflect the relative power held by stakeholders. As Martin and Magnan (2017) highlight, the literature lacks rigorous definition around what 'efficiency' is. If it is maximizing shareholder returns, there is a question of when shareholder returns are maximized and over what period this should be. Efficiency is an assumption that does not consider modern knowledge of human behaviour. Bebchuk and Fried (2006) question the assumption of arms-length contracting, and Ariely's work in behavioural economics (e.g. Ariely, 2010) suggests that we are all subject to influence in our decision-making. We propose that the board tries to achieve a contract that will serve the stakeholders it feels pressure from, and the resulting contract is a result of the proportionate pressure from those stakeholders. We postulate this happens in at least two ways: first, the shareholders remain a powerful force influencing the board but, even shareholders are not a homogenous group and have differing opinions on what the firm should be doing. Combining these opinions with the power of share ownership leads the board to feel it owes some duty to those shareholders with larger positions in the company. Second, boards dealing with high levels of uncertainty in how to proceed with CSR initiatives will mimic what other firms in their industries are doing; this is the process of mimetic isomorphism[2] (DiMaggio and Powell, 1983). If the contract was efficient, it wouldn't matter whether a shareholder has a short-term view or a long-term view or what competitors are doing; no differences should exist in the compensation contracts based on stakeholder power. Alternate theories do exist that could be used here for example legitimacy theory (e.g. Patten, 2019); as such this could be examined from a different perspective. We choose a power perspective here to explore these particular multi-stakeholder power dynamics. Firms with short-

[2] Because we examine a one-year sample, we consider imitation in this setting.

term view institutional shareholders should use CSR performance-based incentives at similar rates as those with long-term view institutional shareholders. The composition of shareholders should not have an effect if contracts are truly 'efficient' as the different assemblages of shareholders should not affect firm value or how a board constructs an executive compensation contract. We argue that the executive compensation process is not 'efficient' because it is affected by these factors, such as what competitors are doing and what shareholders want them to do. This influence changes the use of CSR performance-based incentives in a way that shouldn't happen if contracts are actually efficient.

Ultimately, if the contract is efficient, then having stakeholders with different motivations and power should not affect the use of CSR performance-based incentives. As such, stakeholder power will not be a moderating factor, and the inclusion of CSR performance-based incentives can be interpreted as part of the efficient contracting process. However, if there is variation in the usage of CSR performance-based incentives in relation to different levels of stakeholder power, then the inclusion of CSR performance-based incentives provides additional evidence that the executive compensation process is not efficient.

In a bid to ensure that executive pay is 'performance-based', firms tie various aspects of the executive compensation contract to the achievement of different targets. Typically, incentive targets are not released to the public until the year following the performance at which point in time it is communicated in the annual proxy statement with varying levels of detail. Dahlmann, Branicki and Brammer (2017) do find that incentives matter when it comes to improving environmental performance. It is key that incentives reflect a variety of metrics related to the goal at hand and be distributed throughout the organization (ibid). What is less clear is why firms adopt such incentives in the first place. It is possible that firms adopt such incentives to formalize less salient objectives. Gabel and Sinclair-Desgagné (1993) argue that such incentives formalize less salient goals for management. This implies that where such goals are part of the culture and organized business strategy, formal incentives may not be required. And yet, Maas (2018) finds that firms with poor past corporate social performance are not more likely to use CSR performance-based incentives. It is possible in these cases that the incentives are simply used to signal to the market what the objectives are irrespective of past performance in these areas.

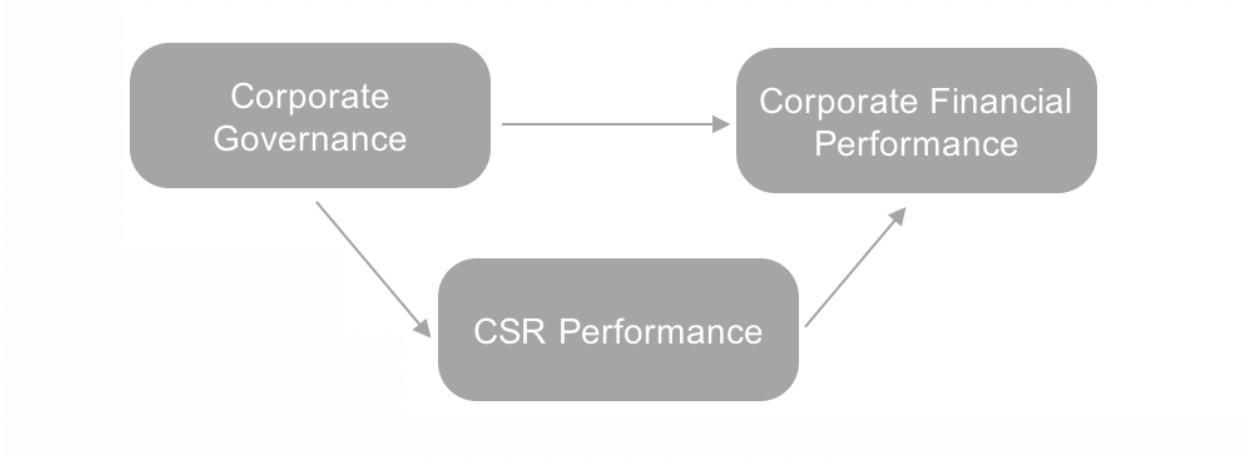
*4.3. CSR performance-based incentives*

It remains an empirical question as to what drivers underlie the use of CSR performance-based metrics in executive incentive contracts. Rodrigue, Magnan and Boulianne (2013) find evidence of stakeholders influencing the selection of environmental performance indicators for internal use within a firm. We propose that stakeholders are utilizing their power to influence the indicators selected in the executive compensation contract as well. Perhaps if stakeholders feel that management should be devoting more emphasis to such social and environmental endeavours, they will exert their influence to formalize management's focus in this direction.

If the board's main task is to ensure the long-term success of the business, it must, consider the firm's ability to attract, retain, and utilize resources to compete and succeed in the marketplace. While it has been traditionally argued that shareholders only desire wealth maximization, we have also seen the rise in the last number of years, as previously noted, of sustainable responsible investing (SRI) by both individual and institutional investors: two key stakeholder groups for any publicly traded firm. These investors in particular may be more interested in the long-term performance of the firm and its social and environmental impacts.

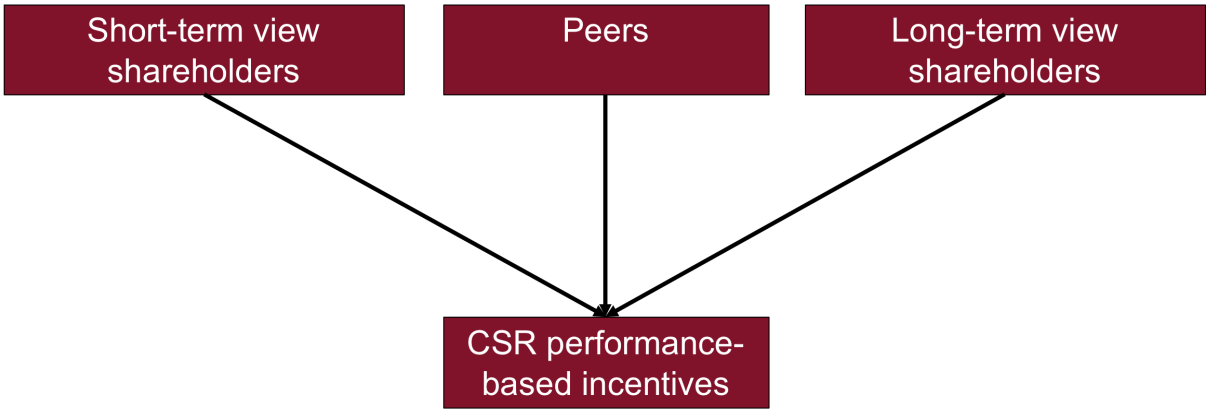
Jo and Harjoto (2012) recently formalized this causal model finding corporate governance leads to corporate social performance as well as to financial performance. Most importantly, corporate social performance leads to financial performance. This model (Figure 1) is one we build on here.

*Figure 1: The causal relationship between corporate governance and performance. Adapted from: Jo & Harjoto, 2012.*



Given that the board of directors has the ultimate responsibility for executive compensation as a key influencer of management behaviour, we propose that the use of CSR performance-based incentives in executive compensation contracts is an attempt by the board to make the contracts efficient subject to the influence of stakeholder power (Figure 2). Here we outline a model whereby the motivations of three stakeholders are examined: those with long-term time horizons (pension funds), those with shorter-term time horizons (hedge funds), and peer institutions. We explore how they exert their influence on the use of CSR performance-based incentives. We posit that the long-term owners will be more likely to desire the use of CSR performance-based incentives as, under the Jo and Harjoto (2012) model, they have the time horizon to realize the long-term financial rewards. Short-term view institutional shareholders however will have less desire for the use of CSR performance-based incentives as their time horizon does not allow for the realization of the financial results that flow from better CSR performance. At the same time, boards may feel pressure to follow similar practices by peer competitors through imitation (e.g. mimetic isomorphism, DiMaggio and Powell, 1983). Given the dynamic challenges presented by the climate crisis and the pressures for firms to address and report on these issues, firms find themselves in uncertain times. Monitoring the competition and making adjustments is standard practice (e.g. Durnev and Mangen, 2009) and copying lead firms may help to reduce such uncertainty or provide additional legitimacy by using CSR performance-based metrics in its executive compensation contracts.

*Figure 2: Proposed model of stakeholder power influencing the executive compensation process*



*4.4. A description of stakeholder power*

This research addresses why firms are utilizing CSR performance-based metrics in their executives' incentive plans and, who is influencing this process. To understand this, we explore how stakeholders affect various aspects of firm operations. Spitzeck & Hansen (2010) apply a conceptual framework of power and scope to determine the effect different stakeholders have on firm decision-making. Not surprisingly, the results vary between firms in terms of how much power and scope various stakeholders have on the decision-making process. Soleimani, Schneper & Newburry (2014) examine how differences in legal power granted to various stakeholders affects corporate reputation. The authors argue moderating relationships exist between three stakeholder groups granted increased legal power (shareholders, creditors and employees) and corporate reputation, and find results to support their hypotheses. Finally, Cobb (2016) develops a model based on how shareholders and executives are allocated varying levels of power by the corporate governance system of the firm and how this in turn affects resource allocation. We can conclude from this line of research that stakeholders, including shareholders, have varying levels of power which can change over time. This power has the potential to influence corporate governance practices and, of concern here, executive compensation practices, by moderating the efficient contracting process.

We posit that stakeholder power moderates the use of CSR performance-based incentives in executive compensation contracts. Prior literature finds that institutional owners vary in their time horizon orientations and motivations (Neubaum & Zahra, 2006; David, O'Brian, Yoshikawa & Delios, 2010; Connelly, Tihanyi, Certo, & Hitt, 2010); pension funds tend to have long-term orientations with lower turnover of share ownership while hedge funds, mutual funds or investment banks tend to have short-term orientations and higher turnover of share ownership. This causes differences in how these firms engage with management and boards at the firms where they are shareholders. Utilizing Jo & Harjoto's model (2012), that corporate governance has a causal relationship to corporate social responsibility performance and financial performance, we make the following propositions in line with this previous research:

1. Institutional owners have differing time orientations in expectation of financial returns and this leads to different levels of support for CSR activities,

2. Long-term institutional owners who require formal incentives to promote long-term financial performance will be more likely to support the use of CSR performance-based incentives,
3. The use of these CSR performance-based incentives will be contingent upon the long-term institutional owner having and exerting sufficient power to influence the executive compensation process.

We propose that if stakeholder power plays a role in the efficient contracting process, this should be evident in the use of CSR performance-based incentives when certain stakeholders have power and the motivation for formal incentives. We expect that where long-term oriented institutional investors hold power, and require formal incentives to promote long-term financial performance, we will see evidence of CSR performance-based incentives. Additionally, we consider the fact that not all long-term institutional shareholders may be interested in CSR and more specifically consider those where CSR is formally monitored vis-à-vis a CSR committee. More formally,

*H1: CSR performance-based incentives are more likely to be used in firms where long-term oriented institutional investors have power and monitor CSR.*

Alternatively, short-term oriented institutional investors are less patient in waiting for financial returns. This is due to their own desire for short-term financial results. According to Jo & Harjoto's (2012) model, the financial results will increase in response to positive CSR performance, however, this takes time. In these situations, where short-term oriented institutional investors hold power, and require incentives to promote short-term financial performance, we expect to see less use of CSR performance-based incentives. Again, we specifically consider those cases where CSR is formally monitored vis-à-vis a CSR committee as presumably this would make it more likely that CSR is important to the firm:

*H2: CSR performance-based incentives are less likely to be used in firms where short-term oriented institutional investors have power and monitor CSR.*

There remains a third possibility, that the use of CSR performance-based incentives in this setting could be due to imitation. Similar forces of mimetic isomorphism are strong and have been identified as a factor in the adoption of other CSR related initiatives (Amor-Esteban, Galindo-Villardon and Garcia-Sanchez, 2018). Such imitation is thought to be a response to uncertainty and given the dynamic, competitive environment and CSR-related pressures, it is possible that firms may succumb to the pressure of adopting similar compensation practices to their peer firms. Consequently, we expect:

*H3: CSR performance-based incentives will be more likely where peer competitors are using them, due to imitation.*

## 5. Method

### *5.1. Sample*

We examine S&P 500 firms. We hand collected CSR performance-based incentive data from the CD&A section of the 2015 proxy statements to determine the use of such incentives for the previous year (2014); this results in a total sample of 505. We use multiple methods to triangulate our results. Specifically, we use 'between-methods' triangulation utilizing both quantitative and qualitative approaches (Smith, 2017). Hopper and Hoque (2006) indicate that data triangulation uses a variety of data sources within a study mixing both quantitative and qualitative methods. This approach has the benefit of allowing the researcher to "take advantage of the strong points of each type of data, cross-check data collected by each method, and collect information that is only available through particular techniques" (ibid, p. 482).

First, to test the hypotheses quantitatively, we use logistic logit regression analysis in SAS. To supplement this quantitative analysis, we conduct qualitative semi-structured interviews to gain insight into our findings and add depth to our understanding of the use of CSR performance-based incentives. Each person interviewed is from a different firm, thus allowing a diversity of thought and perspectives to emerge. Six interviews have been conducted lasting between 30-60 minutes as follows:

| ID | Role | Date of Interview |
|---|---|---|
| CSO | Chief Sustainability Officer for large mining company | 9/20/17 |
| VP | Vice President for large energy management firm | 7/3/2018 |
| ID | Investment Director for major pension fund | 7/5/2018 |
| BD | Board Director for large pension fund | 8/13/2018 |
| SD | Senior Director for pension fund manager | 8/22/2018 |
| HCG | Head of Corporate Governance for large pension fund | 9/26/2018 |

### *5.2. Empirical Model*

The following equation represents the empirical model used to assess the relationship between short-term view institutional shareholders, long-term view institutional shareholders, peer pressure and the use of CSR performance-based incentives:

$$CSR\_INC = B_0 + B_1*LT\_OWN + B_2*ST\_OWN + B_3*FF\_PEER\_PRESSURE + B_4*LT\_OWN*CSR\_COMM + B_5*ST\_OWN*CSR\_COMM + B_6*ESI + B_7*LN\_REV + B_8*CSR\_COMM + B_9*ENV\_SCORE\_2014 + B_{10}*SOC\_SCORE\_2014 + \varepsilon$$

### *5.3. Variable Construction*

We hand collect the data regarding the use of CSR performance-based incentives from the Definitive Proxy Statement (DEF 14A) for all of the S&P 500 companies listed for the year 2015 which details the previous year's CSR performance-based incentives information. We follow previous work to identify the incentives (inter alia Maas, 2018) but apply a stricter interpretation of what qualifies as a CSR performance-based incentive. Specifically, we seek explicit evidence in the proxy statement that social and/or environmental criteria are considered in the determination of the annual incentive plan. Then, we exclude those metrics that arguably can be non-financial metrics designed to solely improve financial performance (namely customer service scores & employee engagement). Following this, we collect the short-term, non-equity incentive compensation levels from Execucomp and a variety of CSR performance data for 2015 from Bloomberg. We gather shareholder data from FactSet and, following previous studies, we use hedge fund shareholders to proxy for short-term view institutional shareholders and pension fund shareholders to proxy for long-term view institutional shareholders. To proxy for when a firm

requires CSR monitoring, we use the presence or absence of a CSR committee at the board level which was identified with data from BoardEx.

*CSR performance-based incentives (CSR_INC)* – If the use of CSR performance-based incentives is present, a dummy variable of 1 is used while 0 is used if no CSR performance-based incentives are present.

*Ownership (ST_OWN & LT_OWN)* – We obtained ownership data from FactSet as the database gives the category of ownership and the % of shares owned. FactSet provides ownership categories based on their analysis of who holds the funds; this data is collected by FactSet using publicly available information including both company websites as well as regulatory filings, in particular 13f filings to determine institutional ownership (FactSet, 2018). We used the categories 'hedge fund ownership' for our short-term institutional ownership proxy and 'pension fund ownership' was used as our proxy for long-term institutional ownership. Power is deemed to be increasing as shareholder ownership increases. To ensure accuracy, we randomly selected 10 firms to double check the shareholder identity and shares outstanding. we obtained the 13f filing by each of those identified institutional shareholders listed as having the largest and/or smallest position in the firm and confirmed that the number of shares outstanding matched the figures found in FactSet. We also independently confirmed that the identity of the institutional shareholder had been correctly assigned to the appropriate category (e.g. pension fund or hedge fund).

*Peer pressure (FF_Peer_Pressure)* – We calculated peer pressure (imitation) as follows: first, we categorized each firm in the S&P 500 using the Fama-French 12 industry codes. Next, we determined the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry. For firms that are already using the CSR performance-based incentives, they were subtracted from the number of users. For example, 13 firms in the non-durable industry use CSR performance-based incentives out of 39 firms in this industry. Therefore, of all firms in this industry, 33.33% use CSR performance-based incentives. If the firm does not use CSR performance-based incentives, the pressure remains at 33.33% but if the firm uses the incentives, the subject firm is deducted leaving a figure of 30.77%. These percentages represent the pressure firms in the non-durable industry face to conform to their peers and use CSR performance-based incentives.

*Other variables* – Presence in an environmentally sensitive industry (*ESI*) is represented by a dummy variable where 1 indicates presence in the ESI, the ESI was defined using 2-digit SIC

codes as follows: Forestry (SIC code 08), Mining (SIC codes 10, 12, 13 & 14), Paper & Allied Products (SIC code 26), Chemical and Allied Products (SIC code 28), Petroleum and Coal Products (SIC code 29), Primary and Fabricated Metal (SIC codes 33 & 34), Water Transportation (SIC code 44), Pipelines (SIC code 46) and Electric, Gas, & Sanitary Services (SIC code 49). Size is proxied by log revenue *(LN_REV).* Both SIC codes and Size are obtained from Compustat Capital IQ. The presence of a CSR committee *(CSR_COMM)* is obtained from BoardEx. The list of all committees was reviewed and classified as a CSR committee if it references "Health, Safety and the Environment", "CSR" or "Corporate Social Responsibility", or "Sustainability". The environmental and social scores (*ENV_SCORE_2014 & SOC_SCORE_2014)* are obtained from Bloomberg using their performance and disclosure score.

## 6. Results

### *6.1. Sample and descriptive statistics*

| | |
|---|---|
| Firms listed in the S&P 500: | 505 |
| Less firms missing necessary proxy statement information and/or duplicates (e.g. two classes of shares listed): | (18) |
| Final list of firms for whom CSR performance-based incentive information was gathered | 487 |

<Insert Table 1 about here>

Table 1 provides descriptive data about the metrics found in the bonus plans for the firms in the S&P 500 for the year 2014. The proportion of firms with CSR performance-based incentives is 32.85%. This is slightly less than found by previous studies but expected given the stricter definition applied here.

<Insert Tables 2 and 3 about here>

Table 2 reports on the variables used in the model. The mean level of LT_OWN is 3.3673% while it is 5.4244% for ST_OWN. The maximum position for LT_OWN is 10.3503%

of shares outstanding while for ST_OWN it is 49.3320%. Firms show mean ENV_SCORE_2014 and SOC_SCORE_2014 of 28.1036 and 28.0560 respectively.

Table 3 examines the descriptive statistics by way a two-sample t-test of CSR performance-based incentives use. Two of the key variables, ST_OWN (dif. 1.1675, p-value 0.0181) and FF_Peer_Pressure (dif. -0.0238, p-value <0.0001) are significantly different between the two groups. ESI (dif. -0.3499, p-value <0.0001) and CSR_COMM (dif. -0.1773, p-value <0.0001) are also significant with all remaining variables except LT_OWN showing significant differences between the two groups.

<Insert Figure 3 about here>

Figure 3 shows the use of CSR performance-based incentives by industry using the Fama-French 12 industry categorization. Unlike previous research, the current sample shows broad use of these incentives with all of the 12 industries showing CSR performance-based incentive use. Utilities, Oil, Gas, and Coal Extraction and Products as well as the Finance industry are the greatest users of these incentives.

<Insert Table 4 about here>

Table 4 shows the correlations between the variables. The results show a significant negative correlation between CSR_INC and ST_OWN (-0.09218, p-value < 0.05) but no correlation to LT_OWN. Additionally, the table shows a significant positive correlation between the CSR_INC and FF_Peer_Pressure (0.23942, p-value < 0.01). Presence in ESI, LN_REV, CSRM_COMM, ENV_SCORE_2014, SOC_SCORE_2014 all show significant positive correlations as well to CSR_INC. No correlations exceed 0.8 minimizing concerns of multicollinearity.

### *6.2. Binary logistic regression and interview results*

The Hausman specification test (untabulated) indicates that a binary regression technique is sufficient for estimating the parameters of the equation. As such, 2SLS is not used to estimate the parameters in this regard. Logistic regression deletes observations where there are missing

values, consequently 141 observations were deleted leaving 346 for the analysis. We first conduct an analysis using a basic model without considering any interactions with the CSR committee.

Table 5 shows the model fit statistics which indicate a good fit for the model. Specifically, the Likelihood ratio (84.22, p-value <0.0001) indicates that the model here fits significantly better than the null. Additionally, the Hosmer and Lemeshow Goodness-of-Fit Test is non-significant (9.99, p-value 0.27) indicating that the model is a good fit.

<Insert Table 5 about here>

<Insert Tables 6 and 7 about here>

Table 6 shows the results for the basic model logistic regression. Neither LT_OWN nor ST_OWN are significant however FF_Peer_Pressure is significantly positive (10.17, p-value < 0.00). ESI is also significant and positive (1.33, p-value < 0.0001) as is LN_REV (0.37, p-value < 0.01). Additionally, Table 7 shows that the model is robust.

Next we consider how the monitoring of CSR vis-à-vis the CSR committee moderates this relationship. Table 8 shows the model fit statistics for the interaction model which indicate a good fit for the model. Specifically, the Likelihood ratio (88.22, p-value <0.0001) indicates that the model here fits significantly better than the null. Additionally, the Hosmer and Lemeshow Goodness-of-Fit Test is non-significant (10.72, p-value 0.22) indicating that the model is a good fit.

<Insert Table 8 about here>

<Insert Tables 9 and 10 about here>

Table 9 shows the results for the logistic regression. H1 predicted LT_OWN*CSR_COMM would be significantly positive however there is no support for this hypothesis (0.27, p-value 0.54). H2 predicted ST_OWN*CSR_COMM would be significantly negative and the results are significant and in the predicted direction (-0.14, p-value 0.05) indicating support for this hypothesis. Finally, H3 predicted that FF_Peer_Pressure would be significant and positive, and the results are significant and positive as predicted (10.18, p-value <0.0001) supporting H3. To put this in perspective, a 10% increase in peer pressure results in a 2.32% increased use of CSR performance-based incentives. Additionally, Table 10 shows that the

model is robust.

To better understand what is going on, we turn to some of our interviews for insight. The investment director for a large company responsible for multiple pension funds shares the following anecdote about a stake they held in a prominent transportation company:

> When they had the activist investor [prominent hedge fund], basically, … we had several attempts to have [the hedge fund] put health and safety in the compensation and they absolutely would not do it. It wasn't until [the hedge fund] pulled out of their position that we were able to then talk to some of the newer members of the board and say look, we've been pushing for this for several years. Now that the dynamics are a bit different maybe you could do so, and they did put it in… That was a very interesting example to me because it was quite immediate. As soon as [the hedge fund] was out of the picture the board actually followed through on our request to do that. – ID

This anecdotally supports H1 and H2. Long-term view institutional shareholders are pushing firms for a long-term focus from management but encounter short-termism from other shareholders. This dynamic is supported by another interviewee, the senior director, who indicates:

> "since not every investor is a long-term one or [has] the same long-term view like we do, they get pressure from short-term investors and hedge funds and those companies that care less about the long-term." – SD
>
> "Sustainability issues are per se long-term, … as a long-term investor we really have a view of sustainability within the long-term" – SD

Given the lack of quantitative support in the analyses for H1, this may suggest other factors are at play that have yet to be explored. The interviews support the idea that long-term view institutional shareholders have different views than short-term view institutional shareholders and these are generating friction and pressure that boards must deal with. These different stakeholders appear to be pressing boards to meet varying demands, and this affects the usage of CSR performance-based incentives. It appears that institutional investors themselves are also feeling the pressure from their constituents:

> I would say [sustainability is] a priority for most of them, certainly our large pension clients. I mean, we do have over 30 clients but the big four or five would be the main ones that represent most of our clients and it is a priority for all of them… We get lots of

questions. They want to know our strategy, so they very much are paying attention and are trying to also be accountable to their stakeholders which would be their beneficiaries. – ID

"I think when you are primarily serving pension fund clients it's just kind of more natural to think: is this company going to be sustainable for the longer term?" – ID

Lastly, for H3, we examine the FF_Peer_Pressure variable and it is significant showing that firms are significantly more likely to use CSR performance-based incentives when they face pressure from their peers: imitation. The role of peer pressure also appears to have a channel through shareholders:

"I think that you usually have leaders [in the industry] and we do a lot of research around the peers and what they are doing, and we do bring that up to the companies and they are sensitive to those arguments" - SD

The pressure to examine the stakeholder environment and respond is one that firms appear to be well aware of:

it's really a combination of many different things, both internal and external… But at the same time, we're being impacted by external events, external stakeholders. We have incidents in our communities, we have grievances, we have external NGOs throwing stones at us, we have talent issues, we have government relations issues. There are other external pressures that basically support the need for this [CSR performance-based incentives] to be put in place. It's a combination of a whole suite of things. Investors ask us. It's not a single driver or a single factor that influences this, it's a multitude of factors, as you would expect in any complex organisation, especially one that works around the world in difficult environments and whatnot. – CSO

In terms of understanding both why firms are adopting CSR incentives and who is influencing the process, interviewees reiterated that stakeholders are increasingly holding firms more accountable and pressing for changes:

I think institutional shareholders are finding that their constituents, their investor base is very interested in being socially responsible. So, you get to some of the university endowment funds and you see some of them take dramatic action as to what they'll invest in and not invest in. The pension funds clearly find it important, and you and I investing in mutual funds want to invest in something that's socially responsible, so I think it's the

> demand for more verification around ESG is coming from the shareholders or stakeholders. – BD
>
> a lot of mainstream institutional investors like Blackrock, Vanguard, State Street, etc., are now hiring their own analysts to cover ESG issues for them. As part of their obligations under the principles for responsible investing, they probably are signatories to that and would then have obligations under those, their commitments to PRI. We're seeing more and more of that… We have more calls with those types of investors, that traditionally we wouldn't have those ESG investors or analysts and therefore they typically wouldn't talk to us that much. But now they are. My phone rings off the hook. - CSO

Interviewees also suggest that stakeholders are actively engaging with both the board and management indicating multiple points of pressure on firm activities:

> So just taking the executive compensation aspects, where we did not support a company's compensation plan, we would write them a letter explaining why we don't do that or why we don't support it. That would be a letter directly to the board and that would often be a conversation with the board. So, in terms of ongoing, kind of day to day conversations, it is more with management. We also do interact quite a bit at the board level. - ID

A firm has many different tools they can use to address what stakeholders are looking for, but firms appear to be responding, in part, with the use of CSR performance-based incentives. Digging deeper with interviewees on why this might the tool of choice, the interviewees revealed the following:

> we are moving away from more of a pure CSR type of approach to an integrated, you know, these are the issues that drive our business and create shareholder value and therefore they belong in the compensation plan. They're not just, kind of, a nice to have corporate philanthropy program. – ID
>
> I think it's expectations of investors and also other stakeholders. I think it does illustrate to an outsider how seriously you take it. So, if all of your annual reports… are talking about how safety is the most important thing but yet it's not reflected in the compensation, there's a bit of a disconnect there. So, I think it does show credibility. If you're talking about these things, saying they're important to your business strategy, it kind of has to go in the compensation so there is that kind of accountability piece. – ID

I look at [the use of CSR performance-based incentives] as changing behaviours of our leaders and driving change within the organisation. It's one of the most effective change management tools in our toolbox… That's fundamentally what drives what we're doing here with these incentives. I think the people involved are… looking for different levers to pull in order to make the change, and, as I said, that's a very good one. – CSO

we're managing primarily assets for the pension fund clients that we have, and so therefore we take a longer-term view of a company's performance, and we would certainly believe, and it is built into our investment beliefs, that companies that manage their ESG risk are going to perform better in the long run. So, if you have an issue like health and safety, or environmental performance that would be key for you to really succeed in fulfilling your strategy as a company, then we feel that it's appropriate to incentivize management to pay attention to those factors because… I guess it's the old [adage] what gets measured gets managed and with it built into the incentive package that you know that…there's some budget attached and that it's going to actually get some attention internally rather than being talked about but nobody really being held accountable for it. - ID

## 7. Robustness tests

It is possible that peer pressure also moderates the shareholder relationship. To test this, we re-run our regressions using an interaction term between FF_Peer_Pressure and each of ST_OWN and LT_OWN. The results, shown in Table 11, do not indicate any significance for either interaction.

<Insert Table 11 about here>

Additionally, of the 160 firms who use CSR performance-based incentives, 155 (96.88%) use a compensation consultant. As such, it is entirely possible that certain consulting firms are driving the effect. Using a dummy variable to represent the associated compensation consulting firm, we re-run our regression and do not find any significant association with a particular firm (untabulated). The estimates remain qualitatively similar to previous results.

## 8. Discussion

The main purpose of this paper is to investigate why firms are using CSR performance-based incentives and who is influencing its use. No significant results were found quantitatively for firms with long-term view institutional shareholders however some anecdotal support was provided from the qualitative interview data. Specifically, firms with higher levels of long-term view institutional shareholders are no more or less likely to use CSR-performance based incentives. Evidence was also provided by various interviewees that support the notions that a) different shareholders have differing time horizons, b) a variety of stakeholders put pressure on firms to align these time horizons and c) CSR performance-based incentives are perceived to be an effective tool to do this. Institutional shareholders appear to feel pressure from their constituents to both invest in responsible firms, but also to ensure that long-term financial payouts will be available to match long-term financial needs. Anecdotally, long-term view institutional shareholders, like pension funds, appear to put pressure on firms to adopt metrics into the executive compensation plan to support their preferred time frame. It is suggested that this perspective often comes up against those with different time frames and views; the stakeholder with greater power succeeds. Further research is needed to understand the other factors that could be influencing this given that the interview data appears to indicate pressure to use these incentives by long-term view institutional shareholders.

Results suggest that short-term view institutional shareholders are influencing firms not to use CSR performance-based incentives. This is consistent with, and provides support for, hypothesis 2. Short-term view institutional shareholders appear adept at focusing the management on financial issues (non-CSR issues) and keeping the incentives aligned to this short-term focus.

Finally, our third hypothesis predicted that firms in industries with high usage of CSR performance-based incentives would be more likely to use them and the results also provide support for this. If a firm faces industry peer pressure, there is a significant chance that they too will adopt them. This is in line with both imitation and our knowledge of CSR practices. CSR remains a dynamic issue with no clear superior directions available for firms to follow. By mimicking their peers, it appears that firms are attempting to best deal with these uncertainties.

Overall, we interpret these results as providing support for the idea that different stakeholder groups exert pressure on the executive compensation setting process. In this case,

short-term view institutional shareholders seeking short-term financial performance are pressuring firms not to use CSR performance-based incentives while long-term view institutional shareholders continue to push for the use of such incentives in line with a longer-term view although the latter show no significant results. Additionally, peer pressure from industry peers significantly increases the probability that firms will use CSR performance-based incentives. As the popularity of CSR performance-based incentives rises amongst their competitors, companies feel pressured to adopt the 'latest innovation'.

## 9. Conclusions and Future Research

Stakeholders are exerting their influence over firm activities and we should be aware of the power they wield. Assuming that the executive compensation process is ultimately efficient ignores the likelihood that power and influence affect the process. This research provides further evidence that different stakeholders wield power and they use this power to influence corporate governance and firm activities. In response to peers using CSR performance-based incentives, firms adopt them in greater numbers as the pressure rises. Additionally, those stakeholders seeking a short-term focus pressure firms not to use CSR performance-based incentives. Unfortunately, this may result in stakeholders that negatively influence firm activities seeking short-term financial gain and then capitalize on their position leaving the firm vulnerable in the long run. The remaining stakeholders should be wary of such short-term initiatives as the long-term impact of this is not yet known but would be interesting for future research.

This research has certain limitations. First, there are many dimensions which may affect how boards look at CSR, but it is difficult to see which ones are most impactful, this remains a possible confounding factor. Our sample is one year only and more could be learned from a multi-year sample. It is possible that correlated omitted variables are driving the effects and other theoretical alternatives do exist that could have been used to explore the questions at hand. Our interviews sought perspectives on our U.S. context however our interviewees often had international experience, while we focused on the U.S. setting, it is possible that some international perspectives may have emerged. Additionally, we do not consider the real effects of the use of CSR performance-based incentives. Regardless, we do not feel that these limitations negate the findings from this work.

It would be useful to investigate the longer-term performance consequences of these incentives to ascertain if, or when, positive CSR and financial performance is achieved. How do the various timeframes relate to the time needed for positive CSR performance? How do other stakeholder groups, like employees or investment fund constituents, play a role in the use of CSR performance-based incentives? Are there geographic differences in use or impact? This is also likely dependent upon the specific types of CSR performance-based incentives adopted as it is likely that not all incentives are created equally, and further research could help to clarify this. It would also be interesting to determine how different time frame perceptions change how stakeholders engage with firms over time. It would also be useful to investigate the differences in the types of pressure felt by the board such as whether there are different effects if the pressure is real vs. perceived. Arguably, competitive firms' actions may cause boards to feel perceived pressure while the pressure exerted by shareholders may be more direct (e.g. real). With regards to imitation, future research can explore further why this pressure exists: are managers seeing that their peers are receiving bonuses for CSR performance and pressuring boards to provide them? Or are directors within these industries bringing expertise on CSR performance-based incentives from other boards to the subject firms to improve their monitoring and advising role? In this regard, it may be seen as 'best practice'. This last point may be at least partially supported by the recent publication from the Canadian Coalition for Good Governance who recently published 'The Directors' E&S Guidebook' (2018) which advocates for the use of CSR performance-based incentives. Do firms simply copy 'leader' firms adopting their CSR performance-based incentives verbatim? Or do firms adjust and adapt to their own circumstances? What factors affect this? How does this mimicking transpire? What agents bring this knowledge to the other firms and how do these individuals affect the use of CSR performance-based incentives?

Additionally, it remains to be investigated what kinds of firms use CSR performance-based incentives, what impact these have and what corporate governance structures best support their use. Going beyond solely investigating large firms, it would be interesting to know if smaller, private firms also use CSR performance-based incentives or if other mechanisms are used as substitutes. Finally, sustainability is a long-term issue and yet the metrics under study are short-term. This brings up an interesting point and one that could be dealt with in future research: why is a long-term concept using short-term metrics? Is this the best way to deal with moving firms towards sustainability? How do these metrics relate to the United Nations Sustainability

Development goals? These are empirical questions that deserve study. As this is an emerging trend, we do not yet have a strong understanding of what motivates firms to use such incentives. While we are beginning to learn more about the use and prevalence of CSR performance-based incentives, much remains to be explored.

**Tables and Figures**

*Table 1: Descriptive data incentive plans*

| | Number | % of total (#/487) |
|---|---|---|
| **Companies with *only financial* metrics in bonus plans** | 164 | 33.68% |
| **Companies with non-financial metrics (but not CSR performance-based metrics)** | 163 | 33.47% |
| **Companies with CSR performance-based incentives in bonus plans** | 160 | 32.85% |
| | **487** | **100.00%** |

*Table 2: Simple Statistics*

| Variables | N | Mean | Std Dev | Min | Max |
|---|---|---|---|---|---|
| **CSR_INC** | 487 | 0.33 | 0.47 | 0 | 1 |
| **LT_OWN** | 475 | 3.37 | 1.16 | 0.48 | 10.35 |
| **ST_OWN** | 475 | 5.42 | 5.94 | 0.17 | 49.33 |
| **FF_Peer_Pressure** | 487 | 0.09 | 0.05 | 0.01 | 0.18 |
| **ESI** | 487 | 0.25 | 0.43 | 0 | 1 |
| **LN_REV** | 481 | 9.18 | 1.20 | 6.24 | 13.09 |
| **CSR_COMM** | 487 | 0.16 | 0.37 | 0 | 1 |
| **ENV_SCORE_2014** | 347 | 28.10 | 18.48 | 0 | 75.97 |
| **SOC_SCORE_2014** | 416 | 28.06 | 15.67 | 3.33 | 77.19 |

*Table 3: Two Sample t-tests Split by CSR Performance-Based Incentive Use*

| | CSR_INC Means | | | | |
|---|---|---|---|---|---|
| **VARIABLE** | **0** | **1** | **Dif.** | **t value** | **Pr > \|t\|** |
| **LT_OWN** | 3.35 | 3.39 | -0.04 | -0.40 | 0.69 |
| **ST_OWN** | 5.81 | 4.64 | 1.17 | 2.37 | 0.02 |
| **FF_Peer_Pressure** | 0.08 | 0.11 | -0.02 | -5.05 | <0.0001 |
| **ESI** | 0.14 | 0.49 | -0.35 | -7.95 | <0.0001 |
| **LN_REV** | 8.99 | 9.56 | -0.57 | -5.00 | <0.0001 |
| **CSR_COMM** | 0.10 | 0.28 | -0.18 | -4.49 | <0.0001 |
| **ENV_SCORE_2014** | 24.40 | 33.92 | -9.52 | -4.83 | <0.0001 |
| **SOC_SCORE_2014** | 24.76 | 34.54 | -9.79 | -6.29 | <0.0001 |

*Figure 3: CSR performance-based incentive use across industry*

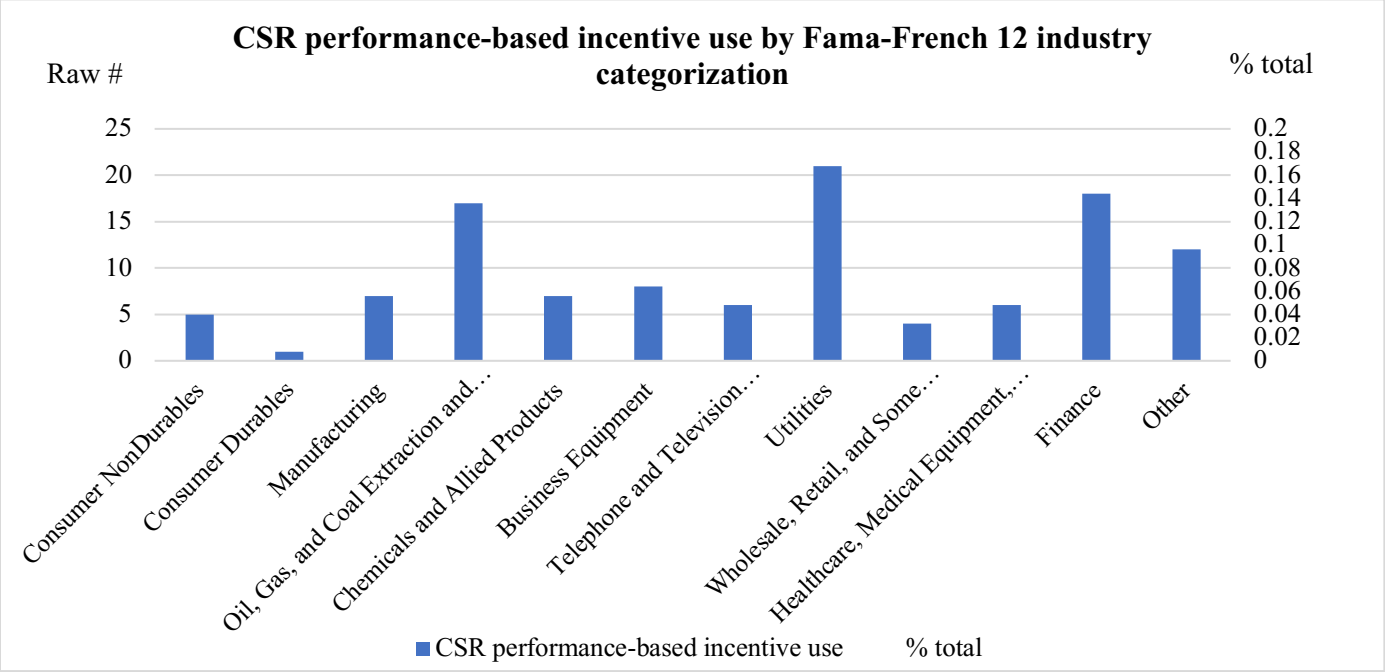


*Table 4: Pearson Correlation Table*

| | CSR_INC | LT_OWN | ST_OWN | FF_Peer _Pressure | ESI | LN_REV | CSR_ COMM | ENV_SCORE _2014 |
|---|---|---|---|---|---|---|---|---|
| **CSR_INC** | | | | | | | | |
| **LT_OWN** | 0.02 | | | | | | | |
| **ST_OWN** | -0.09** | -0.23*** | | | | | | |
| **FF_Peer_Pressure** | 0.24*** | 0.18*** | -0.07 | | | | | |
| **ESI** | 0.38*** | -0.05 | -0.03 | 0.25*** | | | | |
| **LN_REV** | 0.22*** | -0.13*** | -0.15*** | -0.10** | 0.04 | | | |
| **CSR_COMM** | 0.23*** | -0.02 | -0.03 | 0.06 | 0.26*** | 0.14*** | | |
| **ENV_SCORE_2014** | 0.25*** | -0.04 | -0.17*** | -0.07 | 0.19*** | 0.33*** | 0.22*** | |
| **SOC_SCORE_2014** | 0.30*** | -0.01 | -0.13*** | -0.02 | 0.26*** | 0.29*** | 0.23*** | 0.70*** |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively

The dependent variable is *CSR_INC* which is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not. The independent variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives. The control variables are as follows: *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score.

*Table 5: Model Fit Statistics – Basic model*

| | Criterion/ Test | Intercept Only | Intercept and Covariates | Chi-Square | DF | Pr>ChiSq |
|---|---|---|---|---|---|---|
| **Model fit statistics** | **AIC** | 463.92 | 395.70 | | | |
| | **SC** | 467.77 | 430.32 | | | |
| | **-2 Log L** | 461.92 | 377.70 | | | |
| **Testing Global Null Hypothesis** | **Likelihood Ratio** | | | 84.22 | | <.0001 |
| | **Score** | | | 78.86 | 8 | <.0001 |
| | **Wald** | | | 63.16 | | <.0001 |
| **Hosmer and Lemeshow Goodness-of-Fit Test** | | | | 9.99 | 8 | 0.27 |

Note: The R-Square is 0.22 and the Max-Scaled R-Square is 0.29.

*Table 6: Binary Logistic Regression Results – Basic Model, No Interactions*

| Parameter | Predicted sign | Estimate (Wald Chi-Square) |
|---|---|---|
| **Intercept** | | -6.39*** (20.77) |
| **LT_OWN** | + | 0.05 (0.19) |
| **ST_OWN** | - | 0.01 (0.32) |
| **FF_Peer_Pressure** | + | 10.17*** (12.57) |
| **ESI** | | 1.33*** (21.45) |
| **LN_REV** | | 0.37*** (8.99) |
| **CSR_COMM** | | 0.53 (2.59) |
| **ENV_SCORE_2014** | | 0.02 (2.50) |
| **SOC_SCORE_2014** | | 0.01 (0.58) |
| | | |
| **Max-rescaled R-square** | | 0.29 |
| **Likelihood Ratio** | | 84.22*** |
| **N** | | 346 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variable is *CSR_INC* which is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not. The independent variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives. The control variables are as follows: *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score.

*Table 7: Association of Predicted Probabilities and Observed Responses*

| Description | Result |
|---|---|
| **Percent Concordant** | 76.9 |
| **Percent Discordant** | 23.1 |
| **Percent Tied** | 0.0 |
| **Pairs** | 28408 |
| **Somers' D** | 0.54 |
| **Gamma** | 0.54 |
| **Tau-a** | 0.26 |
| **c** | 0.77 |

*Table 8: Model Fit Statistics – Interaction Model*

| | Criterion/ Test | Intercept Only | Intercept and Covariates | Chi-Square | DF | Pr>ChiSq |
|---|---|---|---|---|---|---|
| **Model fit statistics** | **AIC** | 463.92 | 395.70 | | | |
| | **SC** | 467.77 | 438.01 | | | |
| | **-2 Log L** | 461.92 | 373.70 | | | |
| **Testing Global Null Hypothesis** | **Likelihood Ratio** | | | 88.22 | | <.0001 |
| | **Score** | | | 82.13 | 10 | <.0001 |
| | **Wald** | | | 64.53 | | <.0001 |
| **Hosmer and Lemeshow Goodness-of-Fit Test** | | | | 10.72 | 8 | 0.22 |

Note: The R-Square is 0.23 and the Max-Scaled R-Square is 0.31.

*Table 9: Binary Logistic Regression Results*

| Parameter | Predicted sign | Estimate (Wald Chi-Square) |
|---|---|---|
| **Intercept** | | -6.32*** (19.83) |
| **LT_OWN** | | 0.03 (0.07) |
| **ST_OWN** | | 0.03 (1.37) |
| **FF_Peer_Pressure** | + | 10.18*** (12.40) |
| **LT_OWN*CSR_COMM** | + | 0.27 (0.38) |
| **ST_OWN*CSR_COMM** | - | -0.14** (2.97) |
| **ESI** | | 1.38*** (22.56) |
| **LN_REV** | | 0.35*** (7.97) |
| **CSR_COMM** | | 0.24 (0.02) |
| **ENV_SCORE_2014** | | 0.02 (2.31) |
| **SOC_SCORE_2014** | | 0.01 (0.99) |
| | | |
| **Max-rescaled R-square** | | 0.31 |
| **Likelihood Ratio** | | 88.22*** |
| **N** | | 346 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variable is *CSR_INC* which is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not. The independent variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives. The control variables are as follows: *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score.

*Table 10: Association of Predicted Probabilities and Observed Responses*

| Description | Result |
|---|---|
| **Percent Concordant** | 77.5 |
| **Percent Discordant** | 22.5 |
| **Percent Tied** | 0.0 |
| **Pairs** | 28408 |
| **Somers' D** | 0.55 |
| **Gamma** | 0.55 |
| **Tau-a** | 0.26 |
| **c** | 0.78 |

*Table 11: Binary Logistic Regression Results – Peer Pressure and Shareholder Interaction*

| Parameter | Predicted sign | Estimate (Wald Chi-Square) |
|---|---|---|
| **Intercept** | | -7.26*** (15.62) |
| **LT_OWN** | | 0.34 (0.80) |
| **ST_OWN** | | 0.01 (0.04) |
| **FF_Peer_Pressure** | + | 18.28** (2.65) |
| **LT_OWN*FF_Peer_Pressure** | + | -2.39 (0.64) |
| **ST_OWN*FF_Peer_Pressure** | - | -0.00 (0.00) |
| **ESI** | | 1.31*** (20.42) |
| **LN_REV** | | 0.36*** (8.56) |
| **CSR_COMM** | | 0.53 (2.59) |
| **ENV_SCORE_2014** | | 0.02 (2.55) |
| **SOC_SCORE_2014** | | 0.01 (0.57) |
| | | |
| **Max-rescaled R-square** | | 0.30 |
| **Likelihood Ratio** | | 84.87*** |
| **N** | | 346 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variable is *CSR_INC* which is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not. The independent variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives. The control variables are as follows: *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score.

## Appendix 1 - Royal Dutch Shell CSR Performance-Based Incentives Example

| Measures | Sub-measures | Weight | Threshold | Target | Outstanding | Result | Score (0-2) |
|---|---|---|---|---|---|---|---|
| Sustainable Development | | 20% | | | | | |
| Target Executive Bonus = € 1,460,000 salary * 150% = € 2,190,000 * 1.11 score = € 2,400,000 (**164%** of salary); this represented **29%** of the CEO's total compensation (Royal Dutch Shell Annual Report, 2016) | *Total recordable case frequency (injuries/million hours)* | *5%* | *1.20* | *0.96* | *0.72* | *1.00* | 0.83 |
| | *Operational Tier 1 process safety events (number)* | *5%* | *68* | *54* | *40* | *39* | 2.00 |
| | *Volume of operational spills (thousand tonnes)* | *4%* | *0.9* | *0.7* | *0.5* | *0.7* | 1.00 |
| | *Refining Energy Intensity Index (EII™) (indexed to 2002)* | *4%* | *96.8* | *92.2* | *87.6* | *95.4* | 0.31 |
| | *Fresh water intensity (cubic metres per tonne of production) oil sands* | *2%* | *2.80* | *2.25* | *1.70* | *2.74* | 0.11 |

**References**


Abdelmotaal, H., & Abdel-Kader, M. (2016). The use of sustainability incentives in executive remuneration contracts: Firm characteristics and impact on the shareholders' returns. *Journal of Applied Accounting Research*, *17*(3), 311-330.

Amor-Esteban, Víctor, Mª-Purificación Galindo-Villardón, and Isabel-María García-Sánchez. 2018. "Industry Mimetic Isomorphism and Sustainable Development Based on the X-STATIS and HJ-Biplot Methods." *Environmental Science and Pollution Research International*, July. https://doi.org/10.1007/s11356-018-2663-1.

Ariely, Dan. 2010. *Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions*. HarperCollins.

Bebchuk, L. A., & Fried, J. M. (2006). Pay without Performance Overview of the issues. *The Academy of Management Perspectives*, *20*(1), 5-24.

Birshan, M., Gibbs, E., & Strovink, K. (2014). Rethinking the role of the strategist. *McKinsey Quarterly*, *9*. Retrieved from http://www.mfh-online.com/uploads/9/4/0/0/94009645/research_report_strategist.pdf.

Brickley, James A., and Jerold L. Zimmerman. 2010. "Corporate Governance Myths: Comments on Armstrong, Guay, and Weber." *Journal of Accounting and Economics* 50 (2): 235–45.

Canadian Coalition for Good Governance (CCGG). (May, 2018). The Directors' E&S Guidebook. https://www.ccgg.ca/site/ccgg/assets/pdf/the_directors__e_s_guidebook.pdf.

Ceres, (2018). Turning Point: Corporate Progress on the Ceres Roadmap for Sustainability. https://www.ceres.org/node/2275.

Cobb, J. A. (2016). How firms shape income inequality: Stakeholder power, executive decision making, and the structuring of employment relationships. *Academy of Management Review*, *41*(2), 324-348.

Connelly, B. L., Tihanyi, L., Certo, S. T., & Hitt, M. A. (2010). Marching to the beat of different drummers: The influence of institutional owners on competitive actions. *Academy of Management Journal*, *53*(4), 723-742. doi:10.5465/AMJ.2010.52814589.

Core, John E., Wayne R. Guay, and David F. Larcker. 2003. "Executive Equity Compensation and Incentives: A Survey." https://doi.org/10.2139/ssrn.276425.

Cormier, D., & Magnan, M. (2015). The economic relevance of environmental disclosure and its impact on corporate legitimacy: An empirical investigation. *Business Strategy and the Environment*, *24*(6), 431-450. doi:10.1002/bse.1829.

Corporate Knights. (2016). "2016 Global 100". Jan. 20, 2016. http://www.corporateknights.com/reports/global-100/spotlight-on-the-2016-global-100-14533333/.

CSA (Canadian Securities Administrators), (August 1, 2019). CSA Staff Notice 51-358: Reporting of Climate Change-related Risks. https://www.osc.gov.on.ca/documents/en/Securities-Category5/csa_20190801_51-358_reporting-of-climate-change-related-risks.pdf.

Dahlmann, F., Branicki, L., & Brammer, S. (2017). Carrots for corporate sustainability': Impacts of incentive inclusiveness and variety on environmental performance. *Business Strategy and the Environment.*

David, P., O'Brien, J. P., Yoshikawa, T., & Delios, A. (2010). Do shareholders or stakeholders appropriate the rents from corporate diversification? The influence of ownership structure. *Academy of Management Journal*, *53*(3), 636-654.

De Angelis, David, and Yaniv Grinstein. 2015. "Performance Terms in CEO Compensation Contracts." *Review of Finance* 19 (2): 619–51.

DiMaggio, Paul J., and Walter W. Powell. 1983. "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *American Sociological Review* 48 (2): 147–60.

DiNapoli, T. P. (Dec. 12, 2017). Media Release: 'NYS Comptroller DiNapoli: ExxonMobil Agrees to Assess Impacts of Climate Change. https://www.osc.state.ny.us/press/releases/dec17/121217.htm.

Durnev, Art, and Claudine Mangen. 2009. "Corporate Investments: Learning from Restatements." *Journal of Accounting Research* 47 (3): 679–720.

Edmans, A., Gabaix, X., & Jenter, D. (2017). Executive Compensation: A Survey of Theory and Evidence. Retrieved from http://dx.doi.org/10.3386/w23596

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, *14*(1), 57-74.

Elkington, John. (1997). "Cannibals with forks." *The triple bottom line of 21st century.*

FactSet. (2018). 'At a glance: FactSet Ownership Standard Datafeed'. https://insight.factset.com/resources/at-a-glance-factset-ownership-standard-datafeed.

Fink, L. (2018). Larry Fink's Letter to CEOs | BlackRock. Retrieved from https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.

Flammer, C., Hong, B., & Minor, D. (2019). Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes. *Strategic Management Journal*, *40*(7), 1097–1122.

Frydman, Carola, and Dirk Jenter. 2010. "CEO Compensation." *Annual Review of Financial Economics* 2 (1): 75–102.

Gabel, H. L., & Sinclair-Desgagné, B. (1993). Managerial incentives and environmental compliance. *Journal of Environmental Economics and Management*, *24*, 229-240.

Grabner, I., Renders, A., & Yang, L. (2016). *The complementarity between CSR disclosures and the use of CSR-based performance measures in CEO annual incentive contracts.* Retrieved from Google Scholar: http://ssrn.com/abstract=2821379.

Griffin, Paul A., David H. Lont, and Estelle Y. Sun. 2017. "The Relevance to Investors of Greenhouse Gas Emission Disclosures." *Contemporary Accounting Research* 34 (2): 1265–97.

Guay, W. R., Kepler, J., & Tsui, D. (2017, November 7). The Role of Executive Cash Bonuses in Providing Individual and Team Incentives. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2849934

Harrast, S., & Olsen, L. (2016). Climate change disclosures are getting hotter. *Journal of Corporate Accounting & Finance*, *27*(5), 21-28.

Hong, B., Li, Z., & Minor, D. (2015). Corporate governance and executive compensation for corporate social responsibility. *Journal of Business Ethics*, 1-15.

Hopper, T., & Hoque, Z. (2006). Triangulation approaches to accounting research. *Methodological issues in accounting research: theories and methods*, 477-486.

IRRC & Sustainable Investments Institute. (2013). "*Integrated Financial and Sustainability Reporting in the United States".*

Ittner, C. D., Larcker, D. F., & Rajan, M. V. (1997). The choice of performance measures in annual bonus contracts. *Accounting Review*, 231-255.

Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics*, *106*(1), 53-72. doi:10.1007/s10551-011-1052-1.

Kaplan, R. S. (2009). Conceptual Foundations of the Balanced Scorecard. In C. S. Chapman, A. G. Hopwood, & M. D. Shields (Eds.), *Handbooks of Management Accounting Research* (Vol. 3, pp. 1253–1269). Elsevier.

Karpoff, J. M., & Wittry, M. D. (2015). Institutional and political economy considerations in natural experiments: The case of state antitakeover laws. *Available at SSRN 2493913.*

Keyes, S., & Willis, A. (2017). *Climate Change Briefing: Questions for Directors to Ask*. CPA Canada. Retrieved from https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/energy-resources/Climate_Change_Briefing_Questions_for_Directors_to_Ask_-_August_2017.pdf

Kolk, A., & Perego, P. (2014). Sustainable bonuses: Sign of corporate responsibility or window dressing? *Journal of Business Ethics*, *119*(1), 1-15.

Maas, K. (2018). Do Corporate Social Performance Targets in Executive Compensation Contribute to Corporate Social Performance? *Journal of Business Ethics: JBE*, *148*(3), 573–585.

Maas, K., & Rosendaal, S. (2016). Sustainability targets in executive remuneration: Targets, time frame, country and sector specification. *Business Strategy and the Environment*, *25*(6), 390-401.

Martin, D., & Magnan, M. (2017). *Is executive compensation just or unjust? An efficiency perspective.* Working paper.

McCahery, Joseph A., Zacharias Sautner, and Laura T. Starks. 2016. "Behind the Scenes: The Corporate Governance Preferences of Institutional Investors." *The Journal of Finance* 71 (6): 2905–32.

Murphy, K. J. (2012). Executive compensation: Where we are, and how we got there. *Handbook of the Economics of Finance. Elsevier Science North Holland (Forthcoming).*

Neubaum, D. O., & Zahra, S. A. (2006). Institutional ownership and corporate social performance: The moderating effects of investment horizon, activism, and coordination. *Journal of Management*, *32*(1), 108-131.

Nocera, J. (June 23, 2017). "Mylan Shareholders Tilt at Executive-Pay Windmill". Bloomberg. https://www.bloomberg.com/view/articles/2017-06-23/mylan-shareholders-tilt-at-executive-pay-windmill?utm_content=view&utm_campaign=socialflow-organic&utm_source=twitter&utm_medium=social&cmpid%3D=socialflow-twitter-view.

Rodrigue, M., Magnan, M., & Boulianne, E. (2013). Stakeholders' influence on environmental strategy and performance indicators: A managerial perspective. *Management Accounting Research*, *24*(4), 301-316.

*Royal Dutch Shell Annual Report 2016.* (2016). Retrieved from http://reports.shell.com/annual-report/2016/.

Schueth, S. (2003). Socially responsible investing in the united states. *Journal of Business Ethics*, *43*(3), 189-194.

SEC. (2010). *Commission Guidance Regarding Disclosure Related to Climate Change Release No. 33-9106.* (Commission Guidance Regarding Disclosure Related to Climate Change). Retrieved from https://www.sec.gov/rules/interp/2010/33-9106.pdf.

SEC. (2016). *Business and Financial Disclosure Required by Regulation S-K Concept Release No. 33-10064.* Retrieved from https://www.sec.gov/rules/concept/2016/33-10064.pdf.

Smith, M. (2017). *Research methods in accounting*. Sage.

Soleimani, A., Schneper, W. D., & Newburry, W. (2014). The impact of stakeholder power on corporate reputation: A cross-country corporate governance perspective. *Organization Science*, *25*(4), 991-1008.

Spitzeck, H., & Hansen, E. G. (2010). Stakeholder governance: How stakeholders influence corporate decision making. *Corporate Governance*, *10*(4), 378-391.

Supreme Court of Canada Decision. (2008). BCE Inc. and Bell Canada.

Sur, S., Magnan, M., & Cordeiro, J. (2015). Disentangling CEO compensation: A simultaneous examination of time, industry, and firm-level effects. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences De L'Administration*, *32*(1), 30-46.

Tasker, J. P. (2016, December 10). Trudeau announces "pan-Canadian framework" on climate — but Sask., Manitoba hold off. *CBC News*. Retrieved from http://www.cbc.ca/news/politics/trudeau-premiers-climate-deal-1.3888244.

The Conference Board. (2014). "*Proxy Voting Analytics (2010-2014)"*.

The Forum for Sustainable and Responsible Investment. (2017). Sustainable and Impact Investing in the United States Overview. [Web page]. Retrieved from http://www.ussif.org/files/Infographics/Overview%20Infographic.pdf.

Thomson Reuters. (2019). *Global warming could render the assets of many financial companies worthless, Mark Carney warns*. (2019, December 30). Financial Post. https://business.financialpost.com/news/fp-street/boes-carney-says-finance-must-act-faster-on-climate-change

Vollmer, Andrew N. (2011). Consideration of Section 13(d) Rules, File No. 4-624. Retrieved from https://www.sec.gov/comments/4-624/4624-5.pdf

World Economic Forum. (2018). *The Global Risks Report 2018 13th Edition*. Retrieved from http://www3.weforum.org/docs/WEF_GRR18_Report.pdf.

**Who Is More Powerful: The Board Or Management? Exploring The Relationship Between CSR Performance-Based Incentives And Executive Compensation**

**Acknowledgements**
The authors wish to thank Mark Anthony De Luca for his helpful research assistance. Thanks are also expressed to Denis Cormier and Emilio Boulianne for their comments. This research was supported by the Fonds de recherche Société et Culture (FRQSC), a Bertram Scholarship from the Canadian Foundation for Governance Research (CFGR), the Stephen A. Jarislowsky Chair in Corporate Governance and the Institute for Governance of Private and Public Organizations (IGOPP).

**Abstract**

This paper examines one of the possible motivations for the use of CSR-based incentives: whether top management teams are using their power to obtain excess cash compensation (excess is defined as being beyond that to which we would expect them to receive) by including CSR performance-based incentives in their executive compensation contract. On the one hand, under efficient contracting, an executive compensation contract is deemed efficient and as such, no excess compensation would be obtained in the course of using such incentives. On the other hand, a growing body of research shows that executives do wield their power for their own benefit. Focusing on a sample of large firms, results indicate that top management teams appear to be influencing the use of CSR performance-based incentives to obtain excess bonus cash compensation of about 18% higher for the management team than what would be expected otherwise. Additionally, these results are not more common in environmentally sensitive industries and appear to be mitigated by the presence of a CSR committee or long-term view institutional shareholders. This paper breaks new ground in addressing the use of CSR performance-based incentives in relation to excess compensation.

Keywords: Corporate social responsibility; executive compensation; annual incentive plan; corporate governance.

## 1. Introduction

The use of CSR performance-based incentives has grown in recent years but our understanding of what they are, why are they are used and what effects they have is limited. While superficially it may appear to be a 'good thing' that firms are incorporating consideration for social and environmental goals in the bonus plans of executives, there is an extensive literature that firms often engage in 'greenwashing' or 'organized hypocrisy' (Cho, Laine, Roberts and Rodrigue, 2015). Recent years have seen increasing numbers of firms disclosing information regarding its social and environmental initiatives and performance. This is not surprising perhaps, given that such disclosures provide additional legitimacy for firms and are considered useful by analysts (Cormier & Magnan, 2015). One recent trend in relation to executive compensation disclosures relates to social and environmental issues. Firms worldwide are incorporating social and environmental metrics into compensation contracts. For example, Shell has made a number of announcements in recent years regarding the inclusion of sustainable goals in the executive compensation contract (Gopalan, Horn & Milbourn, 2018; Bousso & Schaps, 2016). In the U.S., it has been noted that upwards of 40% of firms in the S&P 500 are currently using some form of CSR performance-based incentive (IRRC & Sustainable Investments Institute, 2013).

While its use is growing, our understanding is quite limited. Initial research finds that the use of such incentives is not determined by past poor CSR performance (Maas, 2018) but is associated with positive financial performance (Flammer, Hong & Minor, 2019; Hong, Li & Minor, 2015; Abdelmotaal & Abdel-Kader, 2016). Additionally, it is associated with greater CSR disclosure levels (Grabner, Renders & Yang, 2016) and is one mechanism to align the interests of shareholders with management as to which set of stakeholders they should focus on (Flammer, Hong & Minor, 2019). It is as of yet unclear however, what role top management teams may play in the use of CSR performance-based incentives.

On the one hand, there is a long line of research that argues executive compensation contracts are efficient and designed to optimize firm value (see Murphy, 2012 for a thorough discussion). Therefore, the use of CSR performance-based incentives must be to optimize firm value in some way. Further, it could be argued that as long as CSR is embedded into the compensation plan, then this must be better than not having CSR performance-based measures.

Consequently, we should not see any difference in excess[3] compensation between similar firms who use CSR performance-based incentives and those who do not.

On the other hand, the managerial hegemony perspective would suggest that top management teams will use their power to obtain extra benefits. Furthermore, management continues to be under pressure to exhibit greater responsibility toward society. When considering this alongside the organized hypocrisy perspective, it suggests that management may work at appearing to satisfy stakeholders while simultaneously acting in a hypocritical way by obtaining additional compensation. As such, it is possible that CSR performance-based incentives may simply be a tool to both extract additional, and unjustified, wealth from the firm and to manage the external pressures from 'responsible' investors seeking 'evidence' of 'responsible' action. Additionally, measurement of CSR performance is rather tricky, with metrics with debatable reliability. The selection of such metrics gives much discretion to management, even if the board agrees, as management is more likely to be knowledgeable about the metrics, their pros and cons, etc. These metrics are beginning to be subject to more rigour but not yet to the extent of GAAP reporting-based measures derived from audited financial statements. Thus, it remains to be seen whether the use of CSR performance-based incentives is purposeful with the intention to improve the corporate social responsibility performance of the firm or whether other factors are at play.

The study addresses three research questions: 1) are top management teams influencing the use of CSR performance-based incentives in the executive compensation contract as a way to obtain excess compensation? 2) is this driven by presence in environmentally sensitive industries? and 3) do corporate governance mechanisms, such as a CSR committee or the influence of long-term view institutional shareholders, mitigate any effect on excess compensation?

The CSR performance-based incentives information is hand collected for the 2014 performance year from the 2015 proxy statements. The final sample comprises 487 distinct firms that comprise the S&P 500 index. We collect information from the Bloomberg, Execucomp, BoardEx and FactSet databases to gather appropriate CSR performance, ownership, power and performance information. We use least squares regression analysis in SAS to explore four unique groupings of firms: those with (without) CSR performance-based incentives and where top management power has (does not have) power.

[3] Excess here is defined as being beyond that to which we would expect them to otherwise receive.

Results show that top management teams do receive approximately 18% more in excess annual short-term compensation, beyond that to which we would expect on a normalized model, when CSR performance-based incentives are used in the compensation contract. Contrary to expectation though, it does not appear that top management teams in environmentally sensitive firms are using these to obtain excess compensation in a significant way. Additionally, the use of a CSR committee appears to reduce excess compensation in some way as does the presence of long-term view institutional shareholders although more research is necessary to understand this further.

This study contributes to the executive compensation research, non-financial performance metrics research, and to the emerging literature on CSR corporate governance. Specifically, this research continues the enquiry into whether or not the use of such incentives is a form of window dressing (Kolk & Perego, 2014). To the best of our knowledge, this study is the first to examine the use of CSR performance-based metrics in executive compensation contracts as a vehicle for top management teams to obtain additional pay beyond that to which we would expect. Second, previous research has taken a mostly positive view of the presence of CSR performance-based incentives; our work shows a more nuanced picture in this respect. Third, we build upon both Maas' (2018) and Flammer, Hong & Minor's (2019) work by examining a previously unexplored explanation that the use of CSR performance-based incentives may relate to maintaining high executive compensation packages as well as how membership in an environmentally sensitive industry (ESI), the existence of a CSR committee or the relative power of long-term view institutional shareholders may mitigate this effect. Fourth, this research adds to our knowledge on annual incentive plans and behavioural implications in executive compensation, both areas where we lack knowledge currently (Edmans and Gabaix, 2016). Fifth, our research extends the executive compensation literature by including a theory previously applied in the CSR literature but not to the executive compensation literature: organized hypocrisy (Brunsson, 1989; e.g. Cho, Laine, Roberts and Rodrigue , 2015). Practically, our research provides evidence that will help boards to better understand management's motivations for the inclusion of CSR performance-based incentives in the executive compensation contract and could have policy implications for regulators, shareholders and other stakeholders seeking for a better understanding of why such incentives are being used.

## 2. CSR Performance-Based Incentives And Executive Compensation

### *2.1. Management and Firms Under Fire*

According to a recent report by the Economic Policy Institute, a non-profit and non-partisan think tank based out of Washington, D.C., the ratio of pay for chief executive officers to an average worker has risen ten-fold from approximately 20 or 30:1 in the 60s and 70s to between 200 and 300:1 today (Baker, Bivens & Scheider, 2019). As Murphy (2012) notes, while this is proportionate to the increase in market capitalization for the period between 1980 and 2003, revenues grew by only 50% after inflation while CEO pay saw a six-fold rise. Magnan and Martin (2018) recount the various ways that this rise in executive pay has been justified over the years and find that the explanations put forth are applied differently to executives than to other employees. It is the dramatic increase, and its enduring rise, that continues to intrigue and perplex researchers and stakeholders alike while drawing the ire of many.

One response to this dramatic rise in pay is the advent of 'Say on Pay'. This mechanism evolved to allow shareholders to vote on the executive compensation packages put forth by the board of directors, the traditional designers of the contract. Originally a voluntary initiative, it soon was mandated in the United States in 2011 requiring that publicly traded firms be required to hold a shareholder vote on the compensation plan. Shortly after implementation, concerns were raised that other stakeholders' interests may not be considered and that disclosures may be manipulated to facilitate shareholder approval (Mangen & Magnan, 2012). These debates are ongoing, and the full impact of Say on Pay is not fully reconciled yet. Correa and Lel (2016) argue that Say on Pay has begun to reign in the pace of wage growth for executives, particularly in firms with high excess pay. Meanwhile, Ferri and Oesch (2016) find that management still influences the process, successfully negotiating for longer time between votes and reducing the likelihood of a change in pay due to a negative Say on Pay vote. As shareholders and other stakeholders take stock of rising executive pay and the (in)effectiveness of Say on Pay, the debate shows no signs of stopping.

At the same time that concern about rising executive compensation is growing, there is increasing pressure on firms to demonstrate 'good' corporate social responsibility. With calls for major investors and banks to divest 'poor' CSR firms (McKibben, 2019), particularly those in environmentally sensitive industries, firms are feeling the pressure to respond. At least $11 trillion

has been divested from fossil fuel stocks and the trend is showing no signs of abating (ibid). This divestiture is shown to negatively affect stock prices as well as investor sentiment (Dordi & Weber, 2019). Larry Fink, Chairman and CEO of Blackrock, the world's largest investment management firm, with nearly $7 trillion in assets under management, recently announced that his firm would be divesting from fossil fuel intensive firms and continued his call for firms to address climate change and become more sustainable (Fink, 2020). Millions of students and those who are sympathetic to the climate crisis are following the lead of Greta Thunberg and striking in the streets to call attention to the climate crisis, demanding that governments and businesses make changes now (BBC News, 2019). The calls for change continue to grow louder and show no signs of dissipating.

The use of CSR performance-based incentives may be the convergence of these two concerns: executive compensation and corporate social responsibility. As the general public continues to focus on issues like wealth and income inequality and climate change, they will continue to seek solutions to ease the impact of these issues on their lives. It is possible, as we investigate here, that the use of CSR performance-based incentives is, in part, a response by firms to the increase in pressure felt in both of these areas.

### *2.2. Executive Compensation*

The field of executive compensation research is too vast to review in its entirety here however there are a number of good reviews which provide excellent recent summaries of the state of the literature (e.g. Murphy, 2012; Edmans & Gabaix, 2016; Edmans, Gabaix & Jenter, 2017). Broadly, two main theories continue to dominate the research in this stream, namely efficient contracting and managerial power, with the first making the assumption that compensation contracts are efficient by nature and the latter assuming that management influences the design to their own benefit (Murphy, 2012). Neither theory, Murphy notes, is sufficient to fully explain executive compensation. In fact, Murphy notes that the managerial power approach rose in part due to the anomalies seen when viewing executive compensation through the efficient contracting lens. This debate has not been settled yet. While Bebchuk and Fried (2006) may be the most well-known critics of the efficient contracting approach, others continue to question the usefulness of efficient contracting as a framework without considering other factors at play. Magnan and Martin (2018) recently discuss this idea revisiting the concept of 'efficient' which has not yet been

rigorously defined. Additionally, they note that the frameworks used to justify executive pay are incoherent or are used differently for executives as compared to the remaining employees; new approaches are needed to widen our understanding of executive compensation.

While the majority of executives receive similar components in their pay (base salary, a short-term and long-term incentive plan, pension and other benefits), the long-term incentive plans, specifically equity-based incentives, arguably dominate the literature (Edmans and Gabaix, 2016). However, while the equity-based components of the executive compensation contract provide for significant wealth accumulation, it is the annual incentive plan that provides for the liquid needs of the management, especially early in their tenure (Guay, Kepler & Tsui, 2017). Additionally, the authors conclude that these bonus payments are important to the incentivization of management (ibid). Additionally, the annual incentive plan provides landmarks for executives in the pursuit of longer-term objectives. However, prior research focuses predominantly on equity-based incentives. Thus, our knowledge of cash-based incentives is less developed despite it comprising a significant portion of the annual compensation of an executive. As such, more research is needed on this important executive compensation area (ibid). In this regard, Murphy (2012) notes that:

> "from a behavioural perspective, annual and multi-year bonus plans based on accounting measures may be as important as equity in actually directing the activities of CEOs and other executives… Most bonus plans are settled in cash soon after the results are tallied (e.g., after the year-end audited financials). The immediacy and tangibility of these cash awards may well provide stronger incentives than the distant and uncertain paper gains in unvested equity plans." (p. 33).

Edmans and Gabaix (2016) discuss the need for further work on the behavioural aspects of the setting of executive compensation contracts. They note that 'rational' models dominate the executive compensation literature while other fields, like finance, have been successful in expanding our knowledge by considering behavioural considerations. In subsequent work, Edmans, Gabaix and Jenter (2017) concur with Murphy's (2012) assessment that no single factor can fully explain executive compensation considering shareholder value maximization, managerial hegemony, and institutional influences. Edmans, Gabaix and Jenter (2017) highlight that much of the research focuses exclusively on the CEO and not on the top management team as a whole but given that the top executive team works together, this would be useful to explore.

### *2.3. CSR performance-based incentives in executive compensation*

John Elkington's 1997 book 'Cannibals with Forks' exemplifies one of the most common current approaches to CSR outlining the now ubiquitous 'triple bottom line' (Elkington, 1997). The triple bottom line approach guides firms to focus not just on financial performance but also on social and environmental performance. This has arguably become the dominant framework used by firms today to pursue corporate social responsibility inclusive of both social and environmental considerations. One major stream of research in this area relates to the organization's use of CSR information to legitimize itself in view of stakeholders (Patten, 2019). Firms will use this strategy to say one thing while doing another (Cho, Guidry, Hageman and Patten, 2012). This poses a serious problem for stakeholders to assess the 'real' performance of the firm as it relates to the CSR of the firm. With the rise of CSR performance-based incentives, at the intersection of executive compensation and CSR, it remains to be seen if legitimacy concerns will be extended to this line of research.

Performance metrics are typically found in both the long- and short-term compensation plans for management. While the short-term compensation plan typically provides annual bonuses to management that are traditionally smaller than long-term bonuses, this is not to be discounted in terms of its influence on management. Guay, Kepler & Tsui (2017) find that annual cash bonuses continue to be instrumental in influencing management and important in the build-up of wealth, particularly for newer executives. In fact, the authors argue that "the pay-performance sensitivity of CEO cash compensation is much greater than prior estimates" (p. 1) making it an important component to incentivizing management. The annual basis of the cash payments also provides for immediate feedback on the executive's performance. Since, as Murphy (2012) notes, individuals must be able to connect their actions with the reward for an effective incentive, cash bonus payments have an important role to play. In recent history, these plans have predominantly used financial metrics to provide the targets for bonus payments (Edmans, Gabaix & Jenter, 2017). Given that non-financial incentives are a leading indicator for financial performance (Davis & Albright, 2004), and recognizing the current and varied pressures faced by management and the board, it is imperative to investigate how new forms of non-financial performance-based incentives are being used.

With the growing importance of CSR, recent evidence suggests that upwards of 40% of firms in the S&P 500 are currently providing bonuses to management based on social and

environmental metrics (IRRC & Sustainable Investments Institute, 2013). However, we are just beginning to understand why such incentives are being used. Most of the literature to date explores the use of financial metrics in the compensation or a broad definition of non-financial metrics (e.g. Ittner et al, 1997). With the rise of the Balanced Scorecard in the 90's (Kaplan & Norton, 1992), much of the focus was on the use of non-financial metrics to drive financial results. However, it is not clear why CSR performance-based incentives are being used.

There is a limited line of research beginning to explore why CSR performance-based incentives are being used. Flammer, Hong & Minor (2019) propose that such incentives may be used to align shareholder's preferences with management's preferences with regards to which stakeholders shareholders' feel are important. While the authors find that these incentives reduce short-termism, increase firm value and improve CSR performance, it is unclear why certain stakeholders would be more important to one group as compared to the other. This is consistent with another study that finds firms using CSR performance-based incentives have better financial performance (Hong, Li & Minor, 2015). The authors of this study also find that the use of CSR performance-based incentives is associated with short tenure directors, more block-holder owners and positive existing CSR performance (ibid). Maas (2018) explores whether firms use CSR performance-based incentives to improve upon past poor sustainability performance but does not find any evidence to support this. She finds that prior CSR performance is not a good predictor of the use of CSR performance-based incentives. Grabner, Renders & Yang (2016) propose that CSR performance-based incentives are a communication mechanism and find that firms with greater CSR disclosure are more likely to provide such incentives. Finally, the use of CSR performance-based incentives is associated with firm size, compensation committee independence, sustainability committees, resource efficiency policies, inclusion on a sustainability index and financial performance (Abdelmotaal & Abdel-Kader, 2016).

Additionally, it is unclear that CSR performance metrics are reliable. As recommended by Maines, Bartov, Fairfield, Hirst, Iannaconi, Mallett, Schrand, Skinner & Vincent (2002), non-financial performance measures should be relevant, predictive, reliable, comparable and consistent. As CSR performance-based incentives are a subset of non-financial performance indicators, one would assume the same criteria should apply. However, there are numerous challenges to creating such indicators. Boiral & Henri (2015) find that it is impossible to compare the performance of firms even within the same industry using the performance measures provided

in their GRI reports. This is due to a variety of reasons including, among others, a lack of compliance and ambiguous information (ibid). Further, only 67% of sustainability reports obtain some form of independent assurance, which still leaves a large portion untouched (Blasco & King, 2017). Presumably, firms seeking independent assurance on these reports would also exhibit higher reliability if the same metrics are used in the executive compensation contract. Using a case study of four firms, Kolk & Perego (2014) examine the verifiability and controllability of CSR performance-based incentives plans as well as how the targets were categorized from short-term to long-term and find a range of results. They find that it is too early to tell if these incentives are a form of window-dressing or real initiatives to improve corporate sustainability (ibid). Maas (2018) also ponders whether these incentives are simply symbolic and whether or not these incentives supplement (of interest here) or replace financial incentives. As such, it is not yet evident that the metrics of CSR performance-based incentives have reached the standards set out to ensure a sufficient level of rigour and to mitigate concerns of management manipulation.

## 3. Theory and Hypotheses Development

This research addresses the questions: 1) are top management teams influencing the use of CSR performance-based incentives as a way to obtain excess compensation?; 2) is this driven by presence in environmentally sensitive industries?; and 3) do corporate governance mechanisms, such as a CSR committee or the influence of long-term view institutional shareholders, mitigate any effect on excess compensation?

On the one hand, the efficient contracting literature that argues that the board is not subject to the desires of management and designs optimal contracts that serve stakeholder interests (e.g. Core, Guay and Larcker, 2003). Applying this to the research questions at hand would imply that since the contracts are efficient by design then no excess compensation should be obtained, on average, for firms using CSR performance-based incentives.

Conversely, a long line of literature beginning with Bebchuk and Fried (2006) and recently reaffirmed by van Essen, Otten and Carberry (2015) in a meta-analytical study, shows that executives use their relative power to obtain extra benefits for themselves; this is the managerial hegemony perspective. This is thought to occur by executives leveraging their close relationships with the board with the aim of influencing its compensation decisions. Bebchuk & Fried (2006)

find that the presence of independent directors helps to mitigate, but does not completely eliminate, the effect of management power. Here, we extend the idea of management power by incorporating organized hypocrisy (Brunsson, 1989)[4]. This is a theoretical framework proposing that firms often make decisions that are inconsistent at some point in the decision-making process. Consequently, what is said may not be consistent with what is decided nor with what is done. The reasons underlying this may relate to the organization having to respond to multiple pressures and conflicting demands. Firms are under increasing pressure to consider a variety of stakeholders in their decision-making (Stout, 2012; Borduas & Vrtkova, 2019; Buckstein, 2019) and this can make these decisions complex, and, at times, hypocritical. In the context of the use of CSR performance-based incentives, executives are facing increased criticism of rising executive compensation levels while firms are being pressured to show they are 'responsible' citizens. Reconciling these demands may lead to decisions in which hypocrisy may exist.

As suggested by Kolk and Perego (2014), executives may be using such incentives as a way to serve their own interests, for example to supplement bonuses in a way that appears pleasing to stakeholders seeking more responsible firms. By incorporating social and environmental metrics into the compensation plan, the firm signals that it is taking stakeholder concerns seriously by 'risking' compensation to achieve better CSR performance. At the same time, top management teams are looking to justify ever growing executive compensation levels and the inclusion of palatable CSR targets may help to provide that justification. Organized hypocrisy in combination with the managerial hegemony perspective would suggest that top management teams may be able to obtain extra compensation vis-à-vis the use of CSR performance-based incentives if they hold power and are able to influence the board in the setting of executive compensation contracts. Thus, it is possible that executives may have found a palatable way to 'justify' increased levels of pay while also satisfying external demands for shows of responsibility.

This leads to our first hypothesis. When management of the firm has power, and wishes to increase their own pay, it is expected that they will use their relationships with the board to negotiate favourable compensation contracts. This will provide management with higher levels of pay than would otherwise be expected. In this case, we expect to see that the use of CSR

[4] There is a debate about whether or not organized hypocrisy is a theory in its' own right or a distinction of legitimacy theory (e.g. Patten, 2019); the authors acknowledge the debate but proceed here with the use of organized hypocrisy as it best represents the authors' perception of the multi-stakeholder pressure and possible hypocritical decisions that may result.

performance-based incentives is associated with an increase in excess executive compensation in the bonus plan:

*H1: When top management teams hold the balance of power, the use of CSR performance-based incentives for management is associated with an increase in excess bonus pay.*

Maas and Rosendaal (2016) outline that the use of CSR performance-based incentives is associated with 'dirty' industries. It has been long known that environmentally-sensitive industries engage in a variety of legitimacy strategies including publishing higher levels of disclosure for the purposes of obfuscating true performance (Cho, Guidry, Hageman and Patten, 2012) and therefore we also consider whether environmentally-sensitive industries use CSR performance-based incentives differently here as well. This leads to the second hypothesis:

*H2: The environmental sensitivity of a firm's industry moderates the relation between managerial power and the use of CSR performance-based incentives for the purpose of receiving excess compensation.*

It is possible that other corporate governance mechanisms moderate the effects on excess compensation of top management power where CSR performance-based incentives are in use. For our third hypothesis, we consider how two mechanisms, the CSR committee and long-term view institutional shareholders, might moderate such an effect. The development of the CSR committee is a relatively recent phenomenon and as such there is still a dearth of information on how they work and what control effect they have. Recent evidence tells us that CSR committees are associated with the use of CSR performance-based incentives (Abdelmotaal & Abdel-Kader, 2016) however, how this works, why some firms adopt these committees and others do not as well as the control effect these committees have is still unknown. Typically, the use of a committee at the board level will focus the board's attention to those particular issues. For example, the audit committee is responsible for, amongst other things, overseeing the audit of the firm's financial statements. It is possible that by closely monitoring CSR issues, the board, in its formation of a CSR committee, may pay closer attention to such issues. Consequently, when a CSR committee is in place, there may be a reduction in the amount of excess compensation paid to the senior

management team. This would be consistent with an efficient contracting approach that manages the various compensation contract designs to maximize firm value. As such, we could expect that the use of a CSR committee will moderate excess compensation when using CSR performance-based incentives.

On the other hand, it is possible under organized hypocrisy, that a CSR committee at the board level may simply be another mechanism to signal to stakeholders that these issues are taken seriously. Organized hypocrisy would predict then that there may be no connection between the use of a CSR committee at the board level and the level of excess compensation in the bonus plans of management. The overall effect of the CSR committee on the excess compensation of management as it relates to the use of CSR performance-based incentives is unclear, so we posit:

*H3a: Use of a CSR committee at the board level moderates excess compensation when using CSR performance-based incentives.*

Long-term view institutional shareholders, like pension plans, are shown to have different time horizons than other shareholders and tend to hold the shares for longer periods of time (Neubaum & Zahra, 2006; David, O'Brian, Yoshikawa & Delios, 2010; Connelly, Tihanyi, Certo, & Hitt, 2010). Additionally, investors have been shown to influence performance indicator adoption by firms (Rodrigue, Magnan & Boulianne, 2013). This may provide a moderating effect when considering the longer-term for the firm and their investment. The pressure from this particular group of shareholders could influence the actions of management by pushing them to address their concerns. If the pressure is sufficient, this may force management to address their concerns in a real way by reducing the excess compensation they are taking. This is consistent with an organized hypocrisy approach where the top management team responds to specific pressures in a narrow way to manage these pressures. Alternatively, if the efficient contracting approach is correct, we should see no excess compensation regardless of the corporate governance mechanisms used or the pressures the firm faces. As such, we posit:

*H3b: The presence of long-term view institutional shareholders moderates excess compensation when using CSR performance-based incentives.*

Ultimately, if the contract is efficient (the efficient contracting perspective on its own fully predicts the behaviour of the firm), it will not matter if the top management team has power. Managerial power and organized hypocrisy should not influence the size of the bonus received by management and no excess compensation will be found. In this case, the inclusion of CSR performance-based incentives will be interpreted as part of the efficient contracting process. However, if there is variation in the usage of CSR performance-based incentives and the corresponding bonus level anticipated in relation to the level of power held by the top management team, then the inclusion of CSR performance-based incentives can be interpreted as potential evidence of managements' influence on their executive compensation contracts as well as evidence of organized hypocrisy in responding to external pressures.

## 4. Method

### *4.1. Sample Selection*

To facilitate comparison with previous studies, we use the firms in the S&P 500. CSR performance-based incentive data for firms in the S&P 500 are hand collected from the CD&A section of the 2015 proxy statements which details the 2014 performance. A total of 505 firms are listed in the S&P 500 however, some companies have multiple listings. Losing the firms with multiple listings and firms with missing variables leaves a final sample of 487 firms. To test hypotheses, we rely on SAS and follow Craighead, Magnan & Thorne (2004) to conduct a contrast analysis to determine if there is a relationship between the excess bonus of management and the use of CSR performance-based incentives. Least squares regression analysis is conducted to test the remaining hypotheses.

### *4.2. Models*

The first empirical model to test H1 is as follows:

Excess compensation = $B_0$ + $B_1$*CSR_INC + $B_2$*TMT_PWR + $B_3$*CSR_INC*TMT_PWR + controls + ε

The second empirical model to test H2 is as follows:

Excess compensation = $B_0 + B_1$*CSR_INC + $B_2$*TMT_PWR + $B_3$*ESI +

$B_4$*CSR_INC*TMT_PWR + $B_5$*CSR_INC*TMT_PWR*ESI + controls + ε

The first part of the third empirical model to test H3a is as follows:

Excess compensation = $B_0 + B_1$*CSR_INC + $B_2$*TMT_PWR + $B_3$*CSR_COMM +

$B_4$*CSR_INC*TMT_PWR + $B_5$*CSR_INC*TMT_PWR*CSR_COMM + controls + ε

Finally, the second part of our third model to test H3b is as follows:

Excess compensation = $B_0 + B_1$*CSR_INC + $B_2$*TMT_PWR + $B_3$*LT_OWN +

$B_4$*CSR_INC*TMT_PWR + $B_5$*CSR_INC*TMT_PWR*LT_OWN + controls + ε

### *4.3. Variable Construction*

*Excess Bonus (EXCESS_BONUS)* – The dependent variable is determined using the bonus amounts granted to the entire top management team (TMT) and are obtained from Compustat - Capital IQ: Execucomp – Monthly Updates: Annual Compensation: Non-Equity Incentive Plan Compensation. We modify Larcker, Ormazabel & Taylor (2011) to calculate the excess bonus received utilizing the natural log of the annual top management team bonuses less the natural log of the median top management team bonuses from the same Fama-French industry group utilizing the 12 categories provided by Fama-French and also categorizing the firms by quintile. This leads to 60 different size/industry categories.

*CSR performance-based incentives (CSR_INC)* – The first of the independent variables is the presence or absence of CSR performance-based incentives. If the firm used CSR performance-based incentives in 2014, a dummy variable of 1 is used while 0 is used if no CSR performance-based incentives are used.

*TMT_PWR* – We use the tenure in years for the CEO as obtained from BoardEx and compare this to the tenure in years of the longest standing director on the board of directors as obtained from BoardEx. If the tenure of the CEO exceeds the tenure of the longest standing director on the board

of directors, the dummy variable is coded 1. If the tenure of the CEO does not exceed that of the longest standing board member, the dummy is coded 0.

*Ownership (LT_OWN & ST_OWN)* – Power is deemed to be increasing in increasing ownership holdings. We obtain ownership data from FactSet as the database gives the category of ownership and the % of shares owned. We use the categories 'hedge fund ownership' for our short-term view institutional shareholder proxy (ST_OWN) and 'pension fund ownership' is used as our proxy for long-term view institutional shareholder proxy (LT_OWN).

*CSR Performance* – We utilize the social disclosure score (SOC_SCORE_2014) from Bloomberg to proxy for social performance and the environmental disclosure score (ENV_SCORE_2014) from Bloomberg to proxy for environmental performance.

Other independent variables - size is log revenue (LN_REV), ROA is the return on assets for the firm and is calculated for 2014; all are obtained from Compustat Capital IQ. Environmentally sensitive industries (ESI) are determined as including those 2-digit SIC codes as follows: Forestry (08), Metal, Mining (10), Coal Mining (12), Oil & Gas Extraction (13), Non-metallic Minerals, Except Fuels (14), Paper & Allied Products (26), Chemical & Allied Products (28), Petroleum & Coal Products (29), Primary Metal Industries (33), Fabricated Metal Industries (34), Water Transportation (44), Pipelines, Except Natural Gas (46), Electric, Gas & Sanitary Services (49). MTB is calculated as the market to book value of common shares outstanding for fiscal 2015 with information gathered from CompuStat. The CSR committee (CSR_COMM) was determined by reviewing the committees on the board and indicating with a dummy variable of 1 any committee that appeared to be a CSR Committee including, for example, Health, Safety & Environmental Committee, Sustainability Committee, Corporate Social Responsibility Committee, etc.

## 5. Results

### *5.1. Sample and descriptive statistics*

The data in Table 12 shows that approximately 32.85% of the sample firms are currently using CSR performance-based incentives. This is slightly lower than found in previous studies although it is at least partially explained by the stricter criteria applied to identify such incentives. Specifically, metrics based on customer service satisfaction and employee engagement, while relating to stakeholders, have been traditionally associated with a direct relationship to financial performance and therefore were excluded from the CSR performance-based metrics here.

<Insert Table 12 about here>

Table 13 shows the descriptive statistics for all variables. On average, the proxy for top management team power, CEO tenure, was about 8.44 years as compared to the tenure of the longest standing board member of 18.30 years. When converted to a dummy variable where 1 indicates that the CEO has more tenure than the longest standing board member, *TMT_PWR* shows a mean value of 0.13. The median for *EXCESS_BONUS* is 0 and consistent with Table 12, the mean for *CSR_INC* is 0.3285, rounded to 0.33 here.

<Insert Table 13 about here>

Table 14 is a two-sample t-test that explores the data as split between firms that use CSR performance-based incentives and those that do not. There is a significant difference in the key variables *TMT_PWR* with a difference of 0.09 (p-value 0.00) and *ST_OWN* (dif. 1.17, p-value 0.02). Additionally, firms using CSR performance-based incentives have significantly better CSR performance as proxied by *ENV_SCORE_2014* (dif. -9.52, p-value <0.0001) and *SOC_SCORE_2014* (dif. -9.79, p-value <0.0001). Finally, firms using CSR performance-based incentives are larger (*LN_REV*, dif. -0.57, p-value <0.0001) and include more environmentally sensitive firms (*ESI* dif. -0.35, p-value <0.0001).

<Insert Table 14 about here>

Figure 4 provides the industry breakdown according to the Fama-French 12-industry classification system. While previous research documents the use of CSR performance-based incentives predominantly in environmentally sensitive industries (ESI), overall the use of such incentives in this sample is spread across all categories.

<Insert Figure 4 about here>

There are a number of significantly correlated variables as shown in Table 15 although no correlations exceed 0.80 minimizing concerns of multicollinearity. Of note, *CSR_INC* is significantly associated with all variables except *LT_OWN* and *MTB*. *TMT_PWR* is negatively correlated to the *EXCESS_BONUS*, *LN_REV*, *ENV_SCORE_2014*, *SOC_SCORE_2014* and *CSR_COMM*. *EXCESS_BONUS*, the dependent variable in this study, is positively correlated to *LT_OWN* and with *ESI* with correlation of 0.09 and 0.10 respectively but negatively correlated to *MTB*, *LN_REV*, and *TMT_PWR* with correlations of -0.08, -0.08 and -0.11 respectively.

<Insert Table 15 about here>

*5.2. Linear regression results*

A Hausman specification test was run to determine whether 2SLS would provide more efficient results for testing the hypotheses. The results (untabulated) show that the use of OLS is efficient for our purposes; consequently, this is how we proceed. The model was analyzed using linear regression in SAS. Our first hypothesis was that if the top management team is using their power to influence the use of CSR performance-based incentives, then this would lead to an excess bonus beyond that which we would expect the executives to be entitled. From the initial evidence in Table 16, there is a significant relationship between *CSR_INC*TMT_PWR* and *EXCESS_BONUS* (1.21, p-value 0.02). We can see from the table *TMT_PWR* on its own has a significantly negative relationship with the *EXCESS_BONUS* (-0.83, p-value < 0.01).

<Insert Table 16 about here>

Following Craighead, Magnan & Thorne (2004), we explore the four distinct groupings of firms in Table 17 with a specific focus on those comparing those firms that have CSR performance-based incentives (*CSR_INC*=1) but no top management power (*TMT_PWR*=0) with firms that have CSR performance-based incentives (*CSR_INC*=1) and top management power (*TMT_PWR*=1). Specifically, we examine the coefficients for $B_0 + B_1 + B_2 + B_3$, which represents the sum of the coefficients where *CSR_INC* and *TMT_PWR* equal 1. We compare this to $B_0 + B_1$ alone *CSR_INC* equals 1 but *TMT_PWR* equals 0. If $B_0 + B_1 + B_2 + B_3 > B_0 + B_1$, then we can conclude that this effect is stronger. As detailed in Table 17, the sum of the coefficients where both *CSR_INC* and *TMT_PWR* is 0.17 which is greater than the sum of the coefficients where *CSR_INC* equals 1 but *TMT_PWR* equals 0, -0.21; the result is significant with a p-value of 0.05. This translates into a roughly 18.89% increase in the average level of excess bonus for top management teams with power using CSR performance-based incentives. Given that the median bonus for all top management teams in the sample is $4,755,149, this results in $898,177 of excess compensation for the top management team, or approximately $180,000 each for a top management team of five individuals. This provides evidence to support our first hypothesis that the top management team is obtaining excess compensation when CSR performance-based incentives are in use. Such a finding is consistent with the managerial hegemony/organized hypocrisy perspective.

<Insert Table 17 about here>

The second hypothesis is about top management teams with power in environmentally sensitive industries using CSR performance-based incentives to obtain excess bonuses, however the evidence does not support this hypothesis as the results are not significant. While *TMT_PWR*CSR_INC* remains significant (1.30, p-value 0.04), *CSR_INC*TMT_PWR*ESI* is not significant in table 18. This suggests that it is not firms in the ESI that are driving such excess bonuses.

<Insert Table 18 about here>

The third hypothesis considers whether the presence of two different corporate governance mechanisms, a CSR committee or long-term view institutional shareholders, in conjunction with top management power and the use of CSR performance-based incentives will moderate the effect on excess bonuses for the top management team. While the interaction term *CSR_INC*TMT_PWR*CSR_COMM* is not significant in Table 19, interestingly, the presence of a CSR committee alone (*CSR_COMM* = -0.59, p-value 0.07) has a significant effect on reducing excess bonuses. Again, the main effect of *CSR_INC*TMT_PWR* retains its significance (1.07, p-value 0.06).

<Insert Table 19 about here>

Finally, we explore whether long-term view institutional shareholders, those with a longer time horizon, may be able to mitigate the effect of top management power on their ability to use CSR performance-based incentives to obtain excess compensation. Again, like the presence of a CSR committee, while *CSR_INC*TMT_PWR*LT_OWN* is not significant, but *CSR_INC*TMT_PWR* remains significant (2.54, p-value 0.10) in table 20.

<Insert Table 20 about here>

## 6. Robustness Tests

It is possible that the effect of the excess compensation is driven not by the entire top management team but by the CEO alone. I re-run the regression, including the contrast test, to see if the effect found is driven solely by excess compensation obtained by the CEO. I do this by replacing the dependent variable with the excess compensation obtained only by the CEO using the same method outlined above for the determining the top management team excess compensation. I find that the excess compensation obtained is not driven by solely the CEO as the model is not significant (untabulated).

Further, given that the majority of firms rely on the use of compensation consultants, it is possible that particular compensation consultants drive the excess bonus. The model is significant with higher explanatory power (adj. $R^2$ of 0.11) and the results are substantially similar to the main

results (untabulated). Interestingly, Compensation Advisory Partners (CAP), Exequity LLP (EXE), Farient Advisors LLC (FARIENT), are significantly and positively associated with excess compensation while PriceWaterhouseCoopers LLP (PWC) and those consultants that were unnamed are negatively associated with excess compensation.

Last, it is possible that the presence or absence of independent directors on the board may affect top management power and thereby affect our results. The main regression is re-run including a dummy variable for the presence or absence of independent directors on the board of directors. The presence of outside directors on the board is associated with lower levels of excess compensation and the main results are substantially similar again (untabulated).

## 7. Conclusions, Limitations and Future Research

This research shows that when top management teams have power, there is a risk that CSR performance-based incentives may be used to obtain excess compensation. This is consistent with the managerial hegemony and organized hypocrisy theories that predict the use of power to obtain extra benefits and the inconsistencies that can occur when trying to manage multiple stakeholders. The notion of excess compensation is inconsistent with the pursuit of corporate social responsibility and yet, we see here, that this is exactly what it is happening. Through the use of CSR performance-based incentives, management teams with power are able to obtain addition individual compensation of over $180,000. While this represents a small portion of overall pay, these funds when combined represents almost $900,000 for the top management team, funds that arguably could be put to better use.

We further considered whether it was environmentally sensitive firms that were driving this effect since these firms are known to engage in greenwashing and hypocritical activities, but we find that leveraging one's power and using CSR performance-based incentives to obtain excess compensation is not confined to the ESI. Finally, we considered whether the use of a CSR committee or the pressure from long-term view institutional shareholders interested in sustainable firm performance, were able to mitigate this type of behaviour. While the main interaction term is not significant, it did appear to reduce the significance of the effect of top management power using CSR performance-based incentives to obtain excess compensation. Overall, we find support for our first hypothesis that top management teams are using their influence and CSR performance-

based incentives to obtain additional compensation. We find no support for our second hypothesis that these effects are being driven by firms in the ESI and mixed support for our third hypothesis that CSR committees and long-term view institutional shareholders may mitigate the effects. This research reaffirms that boards of directors should be aware that top management teams may be using their power to influence the use of CSR performance-based incentives to obtain extra benefits for themselves. The use of CSR performance-based incentives is a relatively new phenomenon that boards themselves may still be getting familiar with. Boards engaging with management on the setting of compensation should be cognizant of the motivations of management in this regard, particularly when new metrics like CSR performance-based incentives are put forth. Additionally, it is possible that corporate governance mechanisms like CSR committees and long-term view institutional shareholders may mitigate management's ability to obtain excess compensation, but further research is needed.

A main limitation of this research is that it did not consider the effectiveness of such CSR performance-based incentives on CSR performance. While we control for the firm's CSR performance both environmentally and socially, it is possible that these external ratings do not accurately reflect the firm's actual performance. This would be useful to further investigate in future research. Additionally, we do not test the actual motivations of the management team. Further, while the model specified used a dummy variable for the use of CSR performance-based incentives, it would be useful to investigate the specific kinds of metrics top management teams prefer and the ease with which some metrics are able to be manipulated versus others. We also do not consider the use of CSR performance-based incentives without interactions; the sole effects could be explored in other work. Further research could investigate the processes that are in place to vet the selection and measurement of such metrics, the role of the CSR committee, as well as how different metrics impact both firm financial and CSR performance. Additionally, with the rise of the United Nations Sustainable Development Goals (UN SDGs), it would be useful to understand if and how firms are incorporating this framework into compensation plans. Given the findings in the additional tests that some compensation consultants are associated with an increase in excess compensation while others are associated with a decrease, this would be interesting to research further. This body of research is just beginning to understand how CSR performance-based incentives are being used, why they exist and what the effects are.

Broadly, this research contributes to the executive compensation research, non-financial performance metrics research and to the emerging literature on CSR corporate governance. In particular, this research contributes to the burgeoning literature on the determinants of CSR performance-based incentives by providing evidence towards resolving one of the key questions: does management influence the use of such incentives to obtain additional benefits? The answer appears to be yes, they do. This builds upon Kolk & Perego's (2014) case study work on the use of sustainable bonuses into which they questioned whether or not the use of these bonuses was window dressing. Much of the subsequent work in this area has taken a more positive approach with the implicit assumption that the use of CSR performance-based incentives is a 'good thing' whereas our research demonstrates that there may be aspects of the use of these incentives that might not be so 'good'. Additionally, this research explores some of the factors that may mitigate this effect by examining firms in the ESI as well as the use of CSR committees and the influence of long-term view institutional shareholders. While firms in the ESI do not appear to abuse their power more than other firms, the use of CSR committees and the influence of long-term view institutional shareholders do appear to mitigate the effect on excess bonus, but further research is necessary to understand this relationship better. This knowledge contributes to our lack of understanding of annual incentive plans as well as the behavioural implications in executive compensation (Edmans and Gabaix, 2016). Finally, we apply the use of a novel theoretical perspective that has been applied in the CSR literature but not yet to the executive compensation literature to our knowledge: organized hypocrisy (Brunsson, 1989; e.g. Cho, Laine, Roberts and Rodrigue, 2015). This paper is the first to our knowledge to address these questions. From a practical perspective, this research may be of interest to boards of directors who wish to have better oversight of the use of CSR performance-based incentives and what corporate governance mechanisms may facilitate better oversight. This research could have policy implications for regulators seeking to improve corporate accountability as well as shareholders and other stakeholders seeking a greater understanding of why such incentives are used how to best implement them.

**Tables and Figures**

*Table 12: Descriptive data incentive plans*

| | Number | % of total (#/487) |
|---|---|---|
| **Companies with *only financial* metrics in bonus plans** | 164 | 33.68% |
| **Companies with non-financial metrics (but not CSR performance-based metrics)** | 163 | 33.47% |
| **Companies with CSR performance-based incentives in bonus plans** | 160 | 32.85% |
| | **487** | **100.00%** |

*Table 13: Simple Statistics*

| Variables | N | Mean | Standard Deviation | Minimum | Maximum | Median |
|---|---|---|---|---|---|---|
| **EXCESS_BONUS** | 487 | -0.37 | 1.58 | -6.96 | 0.82 | 0.00 |
| **CSR_INC** | 487 | 0.33 | 0.47 | 0 | 1 | 0 |
| **TMT_PWR** | 467 | 0.13 | 0.34 | 0 | 1 | 0 |
| **LT_OWN** | 475 | 3.37 | 1.16 | 0.48 | 10.35 | 3.23 |
| **ST_OWN** | 475 | 5.42 | 5.94 | 0.17 | 49.33 | 3.45 |
| **LN_REV** | 481 | 9.18 | 1.20 | 6.24 | 13.09 | 9.06 |
| **ENV_SCORE_2014** | 347 | 28.10 | 18.48 | 0 | 75.97 | 27.59 |
| **SOC_SCORE_2014** | 416 | 28.06 | 15.67 | 3.33 | 77.19 | 22.81 |
| **ESI** | 487 | 0.25 | 0.43 | 0 | 1 | 0 |
| **ROA** | 474 | 0.06 | 0.06 | -0.32 | 0.35 | 0.06 |
| **MTB** | 476 | 3932 | 21279 | -448 | 276808 | 3.27 |
| **CSR_COMM** | 487 | 0.16 | 0.37 | 0 | 1 | 0 |

*Table 14: Two Sample t-tests Split by CSR Performance-Based Incentive Use*

| | CSR_INC Means | | | |
|---|---|---|---|---|
| **VARIABLE** | **0** | **1** | **Dif.** | **t value** |
| **EXCESS_BONUS** | -0.42 | -0.27 | -0.15 | -1.04 |
| **TMT_PWR** | 0.16 | 0.07 | 0.09 | 3.02*** |
| **LT_OWN** | 3.35 | 3.39 | -0.04 | -0.40 |
| **ST_OWN** | 5.81 | 4.64 | 1.17 | 2.37** |
| **LN_REV** | 8.99 | 9.56 | -0.57 | -5.00*** |
| **ENV_SCORE_2014** | 24.40 | 33.92 | -9.52 | -4.83*** |
| **SOC_SCORE_2014** | 24.76 | 34.55 | -9.79 | -6.29*** |
| **ESI** | 0.14 | 0.49 | -0.35 | -7.95*** |
| **ROA** | 0.07 | 0.05 | 0.02 | 2.77*** |
| **MTB** | 3174 | 5472 | -2298 | -0.88 |
| **CSR_COMM** | 0.10 | 0.28 | -0.18 | -4.49*** |

*Table 15: Pearson Correlation Table*

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | EXCESS _BONUS | 1.00 | | | | | | | | | | | |
| 2 | CSR_INC | 0.04 | 1.00 | | | | | | | | | | |
| 3 | TMT_PWR | -0.11 ** | -0.12 *** | 1.00 | | | | | | | | | |
| 4 | LT_OWN | 0.09 * | 0.02 | -0.06 | 1.00 | | | | | | | | |
| 5 | ST_OWN | 0.03 | -0.09 ** | 0.02 | -0.23 *** | 1.00 | | | | | | | |
| 6 | LN_REV | -0.08 * | 0.22 *** | -0.10 ** | -0.13 *** | -0.15 *** | 1.00 | | | | | | |
| 7 | ENV_SCORE _2014 | 0.04 | 0.25 *** | -0.21 *** | -0.04 | -0.17 *** | 0.33 *** | 1.00 | | | | | |
| 8 | SOC_SCORE _2014 | 0.07 | 0.30 *** | -0.15 *** | -0.01 | -0.13 *** | 0.29 *** | 0.70 *** | 1.00 | | | | |
| 9 | ESI | 0.10 ** | 0.38 *** | -0.05 | -0.05 | -0.03 | 0.04 | 0.19 *** | 0.26 *** | 1.00 | | | |
| 10 | ROA | 0.04 | -0.13 *** | 0.06 | -0.09 * | -0.03 | 0.03 | 0.04 | 0.08 | -0.04 | 1.00 | | |
| 11 | MTB | -0.08 * | 0.05 | -0.02 | 0.07 | -0.08 * | 0.17 *** | 0.05 | -0.03 | -0.11 ** | -0.19 *** | 1.00 | |
| 12 | CSR _COMM | -0.07 | 0.23 *** | -0.09 * | -0.02 | -0.03 | 0.14 *** | 0.22 *** | 0.23 *** | 0.26 *** | -0.05 | 0.12 *** | 1.00 |

***,**,* denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively

The dependent variable, *EXCESS_BONUS*, is the natural log of the annual top management team bonuses less the natural log of the median top management team bonus for the same Fama-French industry group split by size quintile. The independent variables are as follows: *CSR_INC,* is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not; *TMT_PWR* is a dummy variable where 1 is coded when the CEOs tenure in years exceeds the tenure of the longest-standing member of the board's tenure in years; *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *ROA* is the return on assets for the firm; *MTB* is the market-to-book value; and the *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not.

*Table 16: Least Squares Regression – Determinants of Excess Bonus – H1*

| Parameter | Predicted sign | Estimate (t-value) |
|---|---|---|
| Intercept | | -0.08 (-0.09) |
| CSR_INC | | -0.13 (-0.68) |
| TMT_PWR | | -0.83*** (-2.95) |
| CSR_INC*TMT_PWR | + | 1.21** (2.09) |
| LT_OWN | | 0.10 (1.45) |
| ST_OWN | | 0.03* (1.95) |
| LN_REV | | -0.10 (-1.31) |
| ENV_SCORE_2014 | | -0.00 (-0.11) |
| SOC_SCORE_2014 | | 0.01 (1.19) |
| ESI | | 0.42** (2.15) |
| ROA | | 0.88 (0.61) |
| MTB | | -0.00 (-0.33) |
| CSR_COMM | | -0.61*** (-2.79) |
| | | |
| Adjusted R-square | | 0.06 |
| F statistic (p-value) | | 2.70*** (0.00) |
| N | | 337 |

***,**,* denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variable, *EXCESS_BONUS*, is the natural log of the annual top management team bonuses less the natural log of the median top management team bonus for the same Fama-French industry group split by size quintile. The independent variables are as follows: *CSR_INC,* is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not; *TMT_PWR* is a dummy variable where 1 is coded when the CEOs tenure in years exceeds the tenure of the longest-standing member of the board's tenure in years; *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *ROA* is the return on assets for the firm; *MTB* is the market-to-book value; and the *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not.

*Table 17: Four Distinct Groups of Firms Coefficients Results – H1*

| | **CSR_INC = 0** | | **CSR_INC = 1** | |
|---|---|---|---|---|
| **TMT_PWR = 0** | $B_0$ | -0.08 | $B_0 + B_1$ | -0.21 |
| **TMT_PWR = 1** | $B_0 + B_2$ | -0.91 | $B_0 + B_1 + B_2 + B_3$ | 0.17 |
| | | | $B_0 + B_1 + B_2 + B_3 > B_0 + B_1$ | 0.17 > -0.21 |

| **Parameter** | **Estimate (t-value)** |
|---|---|
| CSR_INC*TMT_PWR vs. CSR_INC | 1.08 (1.95**) |

The regression equation is:

*EXCESS_BONUS* = $B_0$ + $B_1$ * *CSR_INC* + $B_2$ * *TMT_PWR* + $B_3$ **CSR_INC* * *TMT_PWR* + controls.

The dependent variable, *EXCESS_BONUS*, is the natural log of the annual top management team bonuses less the natural log of the median top management team bonus for the same Fama-French industry group split by size quintile. The independent variables are as follows: *CSR_INC,* is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not; *TMT_PWR* is a dummy variable where 1 is coded when the CEOs tenure in years exceeds the tenure of the longest-standing member of the board's tenure in years; *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *ROA* is the return on assets for the firm; *MTB* is the market-to-book value; and the *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not.

*Table 18: Least Squares Regression Results – H2*

| Parameter | Predicted sign | Estimate (t-value) |
|---|---|---|
| Intercept | | -0.01 (-0.02) |
| CSR_INC | | -0.09 (-0.38) |
| TMT_PWR | | -1.04*** (-3.31) |
| CSR_INC*TMT_PWR | + | 1.30** (1.73) |
| CSR_INC*TMT_PWR*ESI | + | -0.74 (-0.60) |
| LT_OWN | | 0.10 (1.46) |
| ST_OWN | | 0.03* (1.92) |
| LN_REV | | -0.12 (-1.38) |
| ENV_SCORE_2014 | | -0.00 (-0.15) |
| SOC_SCORE_2014 | | 0.01 (1.29) |
| ESI | | 0.33 (1.04) |
| ROA | | 0.69 (0.47) |
| MTB | | -0.00 (-0.38) |
| CSR_COMM | | -0.62*** (-2.81) |
| CSR_INC*ESI | | -0.03 (-0.07) |
| TWT_PWR*ESI | | 1.01 (1.46) |
| | | |
| Adjusted R-square | | 0.06 |
| F statistic (p-value) | | 2.32*** (0.00) |
| N | | 337 |

***,**,* denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variable, *EXCESS_BONUS*, is the natural log of the annual top management team bonuses less the natural log of the median top management team bonus for the same Fama-French industry group split by size quintile. The independent variables are as follows: *CSR_INC,* is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not; *TMT_PWR* is a dummy variable where 1 is coded when the CEOs tenure in years exceeds the tenure of the longest-standing member of the board's tenure in years; *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *ROA* is the return on assets for the firm; *MTB* is the market-to-book value; and the *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not.

*Table 19: Least Squares Regression Results – H3a*

| Parameter | Predicted sign | Estimate (t-value) |
|---|---|---|
| Intercept | | -0.08 (-0.09) |
| CSR_INC | | -0.09 (-0.44) |
| TMT_PWR | | -0.86*** (-2.99) |
| CSR_INC*TMT_PWR | + | 1.07* (1.56) |
| CSR_INC*TMT_PWR*CSR_COMM | - | -0.60 (-0.32) |
| LT_OWN | | 0.11 (1.47) |
| ST_OWN | | 0.03* (1.89) |
| LN_REV | | -0.10 (-1.31) |
| ENV_SCORE_2014 | | -0.00 (-0.08) |
| SOC_SCORE_2014 | | 0.01 (1.21) |
| ESI | | 0.40** (2.00) |
| ROA | | 0.95 (0.66) |
| MTB | | -0.00 (-0.25) |
| CSR_COMM | | -0.59* (-1.82) |
| CSR_INC*CSR_COMM | | -0.13 (-0.28) |
| TWT_PWR*CSR_COMM | | 1.15 (0.75) |
| | | |
| Adjusted R-square | | 0.05 |
| F statistic (p-value) | | 2.20*** (0.01) |
| N | | 337 |

***,**,* denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variable, *EXCESS_BONUS*, is the natural log of the annual top management team bonuses less the natural log of the median top management team bonus for the same Fama-French industry group split by size quintile. The independent variables are as follows: *CSR_INC,* is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not; *TMT_PWR* is a dummy variable where 1 is coded when the CEOs tenure in years exceeds the tenure of the longest-standing member of the board's tenure in years; *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *ROA* is the return on assets for the firm; *MTB* is the market-to-book value; and the *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not.

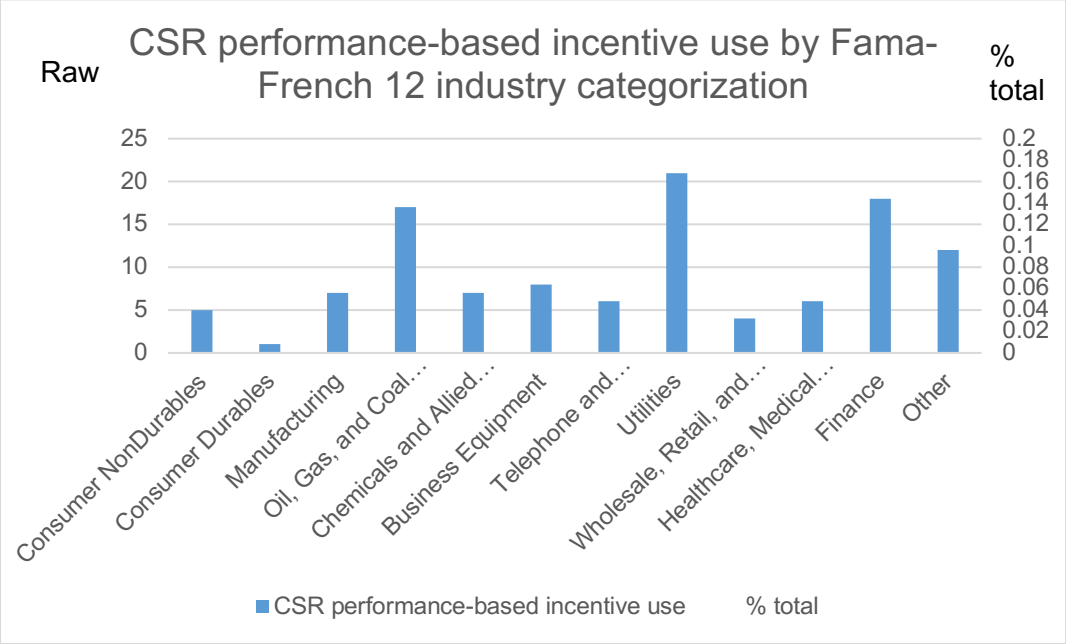
*Table 20: Least Squares Regression Results – H3b*

| Parameter | Predicted Sign | Estimate (t-value) |
|---|---|---|
| Intercept | | 0.05 (0.06) |
| CSR_INC | | -0.36 (-0.55) |
| TMT_PWR | | -1.91*** (-2.60) |
| CSR_INC*TMT_PWR | + | 2.54* (1.27) |
| CSR_INC*TMT_PWR*LT_OWN | - | -0.41 (-0.63) |
| LT_OWN | | 0.05 (0.60) |
| ST_OWN | | 0.03* (1.93) |
| LN_REV | | -0.09 (-1.19) |
| ENV_SCORE_2014 | | -0.00 (-0.19) |
| SOC_SCORE_2014 | | 0.01 (1.14) |
| ESI | | 0.43** (2.18) |
| ROA | | 0.92 (0.64) |
| MTB | | -0.00 (-0.44) |
| CSR_COMM | | -0.61*** (-2.78) |
| CSR_INC*LT_OWN | | 0.06 (0.36) |
| TWT_PWR*LT_OWN | | 0.32 (1.59) |
| | | |
| Adjusted R-square | | 0.06 |
| F statistic (p-value) | | 2.32*** (0.00) |
| N | | 337 |

***,**,* denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively

The dependent variable, *EXCESS_BONUS*, is the natural log of the annual top management team bonuses less the natural log of the median top management team bonus for the same Fama-French industry group split by size quintile. The independent variables are as follows: *CSR_INC,* is a dummy variable where 1 indicates the use of CSR performance-based incentives and 0 does not; *TMT_PWR* is a dummy variable where 1 is coded when the CEOs tenure in years exceeds the tenure of the longest-standing member of the board's tenure in years; *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score; *SOC_SCORE_2014* is the social disclosure score; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *ROA* is the return on assets for the firm; *MTB* is the market-to-book value; and the *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not.

*Figure 4: CSR performance-based incentive use across industries (reproduced from Keddie, 2019)*



**References**


Abdelmotaal, H., & Abdel-Kader, M. (2016). The use of sustainability incentives in executive remuneration contracts: Firm characteristics and impact on the shareholders' returns. *Journal of Applied Accounting Research*, *17*(3), 311-330.

Baker, D., Bivens, J., Scheider, J. (2019). *Reining in CEO compensation and curbing the rise of inequality*. Retrieved from Economic Policy Institute website: https://www.epi.org/files/pdf/168855.pdf.

BBC News. (2019, November 29). The Swedish schoolgirl who inspired a generation. *BBC*. https://www.bbc.com/news/world-europe-49918719

Bebchuk, L. A., & Fried, J. M. (2006). Pay without Performance Overview of the issues. *The Academy of Management Perspectives*, *20*(1), 5-24.

Blasco, J. L., King, A. (2017). *The road ahead: The KPMG survey of corporate responsibility reporting 2017*. KPMG. https://assets.kpmg/content/dam/kpmg/xx/pdf/2017/10/executive-summary-the-kpmg-survey-of-corporate-responsibility-reporting-2017.pdf

Boiral, O., & Henri, J.-F. (2015). Is Sustainability Performance Comparable? A Study of GRI Reports of Mining Organizations. *Business & Society*, *56*(2), 283–317.

Borduas, C.-É., & Vrtkova, P. (2019). *Stakeholders' primacy: paradigm shift confirmed*. Norton, Rose, Fulbright.

Bousso, R., Schaps, K. (Dec. 1, 2016). "Shell ties in bonuses to reinforced emissions strategy". http://www.reuters.com/article/us-shell-emissions-idUSKBN13Q4OA.

Brunsson, N. (1989). The organization of hypocrisy. Talk, decisions and actions in organizations. Chichester: John Wiley & Sons.

Buckstein, J. (Jan/Feb 2019). To Whom Does The Board Owe A Duty? *Director Lens*.

Cho, C. H., Guidry, R. P., Hageman, A. M., & Patten, D. M. (2012). Do actions speak louder than words? An empirical investigation of corporate environmental reputation. *Accounting, Organizations and Society*, *37*(1), 14-25. doi:10.1016/j.aos.2011.12.001.

Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. *Accounting, Organizations and Society*, *40*, 78–94.

Connelly, B. L., Tihanyi, L., Certo, S. T., & Hitt, M. A. (2010). Marching to the Beat of Different Drummers: The Influence of Institutional Owners on Competitive Actions. *Academy of Management Journal*, *53*(4), 723–742.

Core, J. E., Guay, W. R., & Larcker, D. F. (2003). Executive Equity Compensation and Incentives: A Survey. *FRBNY Economic Policy Review.* https://doi.org/10.2139/ssrn.276425.

Cormier, D., & Magnan, M. (2015). The economic relevance of environmental disclosure and its impact on corporate legitimacy: An empirical investigation. *Business Strategy and the Environment*, *24*(6), 431-450. doi:10.1002/bse.1829.

Correa, R., & Lel, U. (2016). Say on pay laws, executive compensation, pay slice, and firm valuation around the world. *Journal of Financial Economics*, *122*(3), 500–520.

Craighead, J. A., Magnan, M. L., & Thorne, L. (2004). The impact of mandated disclosure on performance-based CEO compensation. *Contemporary Accounting Research*, *21*(2), 369–398.

David, P., O'Brien, J. P., & Yoshikawa, T. (2010). Do shareholders or stakeholders appropriate the rents from corporate diversification? The influence of ownership structure. *Academy of Management*. Retrieved from https://journals.aom.org/doi/abs/10.5465/AMJ.2010.51469005

Davis, S., & Albright, T. (2004). An investigation of the effect of Balanced Scorecard implementation on financial performance. *Management Accounting Research*, *15*(2), 135–153.

Dordi, T., & Weber, O. (2019). The Impact of Divestment Announcements on the Share Price of Fossil Fuel Stocks. Sustainability. 11(3122).

Edmans, A., & Gabaix, X. (2016). Executive Compensation: A Modern Primer. *Journal of Economic Literature*, *54*(4), 1232–1287.

Edmans, A., Gabaix, X., & Jenter, D. (2017). Executive Compensation: A Survey of Theory and Evidence. Retrieved from http://dx.doi.org/10.3386/w23596.

Elkington, John. (1997). "Cannibals with forks." *The triple bottom line of 21st century.*

Ferri, F., & Oesch, D. (2016). Management Influence on Investors: Evidence from Shareholder Votes on the Frequency of Say on Pay. *Contemporary Accounting Research*, *33*(4), 1337–1374.

Fink, L. (2020, January). *Larry Fink's Letter to CEOs | BlackRock*. BlackRock. https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter.

Flammer, C., Hong, B., & Minor, D. (2019). Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes. *Strategic Management Journal*, *40*(7), 1097–1122.

Gopalan, Horn & Milbourn. *"Shell is tying executive pay to carbon emissions. Here's why It could create real impact".* CNN Business. December 14, 2018. https://www.cnn.com/2018/12/14/perspectives/shell-executive-pay-carbon-emissions/index.html.

Grabner, I., Renders, A., & Yang, L. (2016). *The complementarity between CSR disclosures and the use of CSR-based performance measures in CEO annual incentive contracts.* Retrieved from Google Scholar: http://ssrn.com/abstract=2821379.

Guay, W. R., Kepler, J. D., & Tsui, D. (2017). Do CEO bonus plans serve a purpose? *Available at SSRN 2849934.*

Hong, B., Li, Z., & Minor, D. (2015). Corporate governance and executive compensation for corporate social responsibility. *Journal of Business Ethics*, 1-15.

IRRC & Sustainable Investments Institute. (2013). "*Integrated Financial and Sustainability Reporting in the United States".*

Ittner, C. D., Larcker, D. F., & Rajan, M. V. (1997). The choice of performance measures in annual bonus contracts. *Accounting Review*, 231-255.

Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard - Measures That Drive Performance. *Harvard Business Review.*

Keddie, L. (2019). Succumbing to the pressure? An investigation of the influence of stakeholder power on CSR performance-based incentives use. Working Paper.

Kolk, A., & Perego, P. (2014). Sustainable bonuses: Sign of corporate responsibility or window dressing? *Journal of Business Ethics*, *119*(1), 1-15. doi:10.1007/s10551-012-1614-x.

Larcker, D. F., Ormazabel, G., Taylor, D. J. (2011). The market reaction to corporate governance regulation. *Journal of Financial Economics*, 101, 431-448.

Maas, K. (2018). Do corporate social performance targets in executive compensation contribute to corporate social performance? Journal of Business Ethics, 148(3), 573-585.

Maas, K., & Rosendaal, S. (2016). Sustainability targets in executive remuneration: Targets, time frame, country and sector specification. *Business Strategy and the Environment*, *25*(6), 390-401. doi:10.1002/bse.1880.

Magnan, M., & Martin, D. (2018). Executive Compensation and Employee Remuneration: The Flexible Principles of Justice in Pay. *Journal of Business Ethics*, 1-17.

Maines, L. A., Bartov, E., Fairfield, P. M., Hirst, D. E., Iannaconi, T. E., Mallett, R., Schrand, C. M., Skinner, D. J., & Vincent, L. (2002). Recommendations on Disclosure of Nonfinancial Performance Measures. *Accounting Horizons*, *16*(4), 353–362.

Mangen, C., Magnan, M. (2012). "Say on Pay" A Wolf in Sheep's Clothing? *Academy of Management Perspectives*. https://doi.org/10.5465/amp.2010.009.

McKibben, B. (October 13, 2019) “Divestment works – and one huge bank can lead the way”. The Guardian. https://www.theguardian.com/commentisfree/2019/oct/13/divestment-bank-european-investment-fossil-fuels?CMP=Share_iOSApp_Other

Murphy, K. J. (2012). Executive compensation: Where we are, and how we got there. *Handbook of the Economics of Finance. Elsevier Science North Holland (Forthcoming).*

Neubaum, D. O., & Zahra, S. A. (2006). Institutional Ownership and Corporate Social Performance: The Moderating Effects of Investment Horizon, Activism, and Coordination. *Journal of Management*, *32*(1), 108–131.

Patten, D. (2019). "Seeking legitimacy", *Sustainability Accounting, Management and Policy Journal*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/SAMPJ-12-2018-0332.

Rodrigue, M., Magnan, M., & Boulianne, E. (2013). Stakeholders’ influence on environmental strategy and performance indicators: A managerial perspective. *Management Accounting Research*, *24*(4), 301-316. doi:10.1016/j.mar.2013.06.004

Stout, L. A. (2012). *The Shareholder Value Myth*. Berrett Keohler Publications.

van Essen, M., Otten, J., & Carberry, E. J. (2012). Assessing Managerial Power Theory: A Meta-Analytic Approach to Understanding the Determinants of CEO Compensation. *Journal of Management*, *41*(1), 164–202.

**The board of directors and CSR performance-based incentives: what's the 'link'?**

**Acknowledgements**

The author wishes to thank Mark Anthony De Luca for his helpful research assistance. The authors express sincere appreciation for the significant feedback received from Dr. Emilio Boulianne and Dr. Denis Cormier. This research was supported by the Fonds de recherche Société et Culture (FRQSC), a Bertram Scholarship from the Canadian Foundation for Governance Research (CFGR), the Stephen A. Jarislowsky Chair in Corporate Governance and the Institute for Governance of Private and Public Organizations (IGOPP).

**Abstract**

This research investigates whether knowledge transfer from the board of directors may affect a firm's use of CSR performance-based incentives. Three possible knowledge transfer scenarios are put forward: 1) 'linking pin' directors who sit on both the CSR committee to the compensation committee within the same firm, 2) 'linking pin' directors who sit on the compensation committee at the firm of interest and a CSR committee elsewhere, and 3) directors with previous board-level experience at firms in environmentally sensitive industries. Relying on hand collected compensation data from S&P 500 firms as well as on governance and financial data, Results show that directors who sit on both the CSR committee and the compensation committee within the same firm are associated with increased use of hard social performance-based metrics in the determination of executive incentives. When directors sit on the compensation committee at the target firm and on the CSR committee at another firm, there is an increased use of hard social and environmental performance-based incentives. Finally, it appears that directors with more experience in environmentally sensitive industries are associated with firms that use CSR performance-based incentives. This research contributes to the executive compensation, CSR and knowledge transfer literatures by further clarifying the determinants of the use of CSR performance-based incentives and the role of the board of directors in this regard. Boards of directors and other stakeholders will be interested in this research to better understand the corporate governance features that are associated with the use of such incentives.

Keywords: Corporate social responsibility; board of directors; knowledge transfer; executive compensation; annual incentive plan; corporate governance; stakeholders; shareholders.

## 1. Introduction

This paper investigates how knowledge transfer occurs on the board of directors as it relates to the use of CSR-based incentives in executive compensation. Three knowledge transfer vectors are considered: 1) directors who sit on the CSR and compensation committees with the same firm; 2) directors who sit on the compensation committee at the firm of interest and the CSR committee elsewhere; and 3) directors with previous experience in environmentally sensitive industries.

The focus on CSR-based incentives determination reflects the increasing pressure being put on corporations to demonstrate 'corporate responsibility' towards society. From Larry Fink (Centre on Executive Compensation, 2017; Fink, 2018; Fink, 2019; Fink, 2020), CEO of BlackRock, the world's largest asset manager to The Canadian Coalition for Good Governance (2018), there are a growing number of calls for businesses to address sustainability concerns. The financial implications for failing to revisit practices and processes to make them environmentally and socially responsible are potentially severe (Financial Post, 2019). An outcome of such societal trends is the rise in the use of corporate social responsibility (CSR) performance-based incentives appears for corporate executives (Ceres, 2018; IRRC & Sustainable Investments Institute, 2013). However, despite their widespread use, and the perceived attributes they carry, little is known about these incentives to date.

A handful of papers examine some of the determinants and features of CSR performance-based incentives. Kolk & Perego (2014) describe the use of sustainable bonuses at four case study firms but highlight that it is too early to tell if these bonuses have a substantive impact or are just window dressing. Maas & Rosendaal (2016) provide some initial descriptions of these incentives finding that are predominantly short-term and mainly used in 'dirty' industries. Further, Maas (2018) examines the differing performance effect of hard and soft targets finding that only hard targets effect CSR performance (hard is defined as having clear-cut quantification while soft lacks this clear-cut quantification). Her work builds on Clarkson, Li, Richardson and Vasvari (2008) who differentiate between objective and soft disclosure claims to infer performance. Both Hong, Li & Minor (2016) and Maas (2018) examine a firm's motivation for using such incentives with Hong et al. (2016) finding more shareholder friendly boards offering the incentives and Maas (2018) investigating whether poor previous CSR performance is driving their use. Maas finds that prior poor CSR performance does not affect the likelihood of use and rules this out as an

explanation (ibid). Haque (2017) finds that a sustainable compensation policy is associated with carbon reduction initiatives while Flammer, Hong & Minor (2019) conclude that CSR performance-based incentives reduce managerial short-termism, increase firm value and CSR performance. The authors conjecture the board uses these incentives to align those stakeholders which best serve the shareholders' interest, with the interests of management.

One possible determinant that has not been previously explored is that of knowledge transfer vis-à-vis 'linking pin' directors. Boards rely on the competencies of their directors to perform both the monitoring and advising tasks (Armstrong, Guay & Weber, 2010). The study of knowledge transfer within and between organizations is applied here relating this to the board of directors. With tasks and responsibilities being assigned to boards becoming more complex, the use of sub-committees continues to rise. Directors who connect two board sub-committees, so called 'linking pin directors', it is theorized, transfer their knowledge between committees. In this regard, Kolev, Wangrow, Barker III & Schepker (2019) highlight that more work is needed to understand the implications of board committee overlap.

To date, most of the work on committee overlap has focused on the audit and compensation committees. Brandes, Dharwadkar & Suh (2016) explore the overlap between the audit and compensation committees theorizing it reduces information asymmetry and find support that these overlaps are important channels for knowledge transfer. Additionally, linking pin directors are associated with lower executive compensation and better monitoring effectiveness (ibid). However, Sassen, Stoffel, Berhmann, Ceschinski & Doan (2018) conduct a meta-analytic review of committee overlap relating to the compensation and audit committees and find mixed results with respect to the monitoring effectiveness of the board.

The development and evolution of the CSR Committee is relatively new, and we are still learning about the function and effect of such committees. Rodrigue, Magnan & Cho (2013) find that environmental committees are associated with a more symbolic approach to environmental governance rather than having a substantive effect on the firm. Peters and Romi (2014) examine the overlap of the CSR Committee with the audit committee and find that disclosure of greenhouse gas emissions is more likely where there is overlap due to a knowledge spillover effect from the directors.

I examine the determinants underlying the use of CSR-based incentives among S&P 500 firms. I hand collect data about the use of CSR performance-based incentives and break this down

into its various sub-components: firms that use only social incentives, firms that use only environmental incentives and firms that use both social and environmental incentives. Further, I code whether the incentives are 'hard' or 'soft' in line with Maas (2018). I gather information regarding the directors on the Compensation and CSR committees at each firm as well as each Compensation committee member's previous five-year experience working as a director in environmentally sensitive industries. I use logistic regressions in SAS to analyze the data.

To understand the questions at hand, I employ two theoretical perspectives. In the first, I explore a knowledge transfer perspective borrowed from organizational behaviour. I rely on work by Argot & Fahrenkopf (2016) who outline how knowledge transfer works within and between organizations vis-à-vis 'members' and apply this to the context of the board of directors. When faced with complex issues, such as CSR and compensation, having directors cross-posted between these board committees may work to facilitate knowledge transfer (Peters and Romi, 2014). As such, I would expect to see increased use of CSR performance-based incentives as directors from the CSR committee transfer this knowledge with the compensation committee to use effective (hard) incentives. Contrasting this perspective, it is possible that firms are simply engaging in organized hypocrisy (Brunnson, 1989; Cho, Laine, Roberts & Rodrigue, 2015)[5]. In this case, I would not expect to see increased use of effective CSR performance-based incentives when directors sit on both the CSR and compensation committees since this would simply be an exercise of hypocrisy but may see increased use of soft CSR performance-based incentives since these are known to be ineffective (Maas, 2018). I also consider a director's environmental experience under both of these perspectives as well and would expect to find a positive relationship with effective CSR performance-based incentives under the knowledge transfer perspective or no relationship if organized hypocrisy dominates.

The first hypothesis, that directors' knowledge transfers when the directors sit on both the CSR committee and the compensation committee to influence the use of CSR performance-based incentives, is supported with the analyses. When directors sit on these committees within the firm, this is significantly associated with the use of hard social performance-based incentives; this is consistent with the knowledge transfer perspective. This may be due to greater knowledge of the

[5] There is a debate about whether or not organized hypocrisy is a theory in its' own right or a distinction of legitimacy theory (e.g. Patten, 2019); the authors acknowledge the debate but proceed here with the use of organized hypocrisy as it best represents the authors' perception of the multi-stakeholder pressure and possible hypocritical decisions that may result.

firm's social needs since the director sits on both committees within the same firm. Further, when directors sit on the compensation committee in the target firm and on a CSR committee at another firm, these directors are associated with the use of hard social and environmental incentives within the target firm; this is consistent with the knowledge transfer perspective for the second hypothesis. By sitting on a CSR committee elsewhere, the directors may be bringing in a broader view of CSR and pressing for the use of hard social and environmental incentives at the same time. Finally, a director's experience sitting on boards in environmentally sensitive industries over the previous five-year period is also positively associated with the use of CSR performance-based incentives. Overall, the results support the hypotheses tested and are all consistent with the knowledge transfer perspective.

To the best of my knowledge, this paper is the first to explore: 1) knowledge transfer as a determinant of the use of CSR performance-based incentives; 2) the effects of linking pin directors between the CSR committee overlapping with the compensation committee as a possible determinant of CSR performance-based incentive use; and 3) the relationship between this knowledge transfer and the sub-components of such incentives. This extends work from Peters and Romi (2014) who explore CSR and audit committee overlap, as well as Brandes et al. (2016) who explore compensation and audit committee overlap. This work also extends the knowledge transfer work of Argote & Fahrenkopf (2016) into CSR performance-based incentives determinants. Previous literature provides some descriptive information on the composition of CSR incentives and Maas (2018) codes the variables as hard or soft. Furthermore, the paper fills a gap in prior research by connecting some of the determinants of CSR performance-based incentives to the use of different sub-categories of these incentives. This work refines our knowledge of the determinants of CSR performance-based incentives which will be of interest to boards, management, shareholders and other stakeholders alike. Practically, this research will help to shape our understanding of why firms and boards select and use different categories of CSR performance-based incentives. Additionally, it is important for firms, boards and other stakeholders to begin to delineate between those practices that are hypocritical and those that are effective in order to better understand the conditions that support both as well as to better identify firms engaging in effective vs. ineffective practices.

## 2. Literature Review: CSR Performance-Based Incentives and Executive Compensation

The pressure on corporations to demonstrate 'corporate responsibility' towards society continues to grow stronger daily. Larry Fink, CEO of BlackRock, the world's largest asset manager with nearly $7 trillion in assets under management, has called for several years now for corporations to become more sustainable (Centre on Executive Compensation, 2017; Fink, 2018; Fink, 2019; Fink, 2020). The Canadian Coalition for Good Governance includes explicit guidance for directors in 'The Directors' E&S Guidebook' (2018) to include social and environmental metrics in the compensation plan for management. Mark Carney, former Governor of the Bank of England and former Governor of the Bank of Canada, has warned that many assets could become worthless as society transitions to a low carbon economy in light of the climate crisis (Financial Post, 2019). Additionally, CSR and corporate governance are connected and have an effect on capital markets whereby good corporate governance and good CSR attract analysts (Cormier & Magnan, 2014). In short, stakeholders are demanding information and change, the world is changing rapidly, and businesses need to respond.

The use of corporate social responsibility (CSR) performance-based incentives is an area in which there is scant knowledge. It is unclear what is the exact prevalence of their use since definitions vary, but estimates put the proportion of firms using of CSR performance-based incentives at between 24% and 43% (Ceres, 2018; IRRC & Sustainable Investments Institute, 2013).

### *2.1. Performance metrics and executive compensation*

The literature on performance metrics underlying executive compensation contracts follows a variety of streams. Of interest here are the determinants of performance metrics. These metrics can be found in either the short- or long-term components of the executive compensation contract. Edmans, Gabaix & Jenter (2017) note that accounting-based metrics are used more often than stock-based metrics and this is increasing over time. Guay, Kepler & Tsui (2019) show that performance measures tend to be consistent for the entire top management team (about 2/3 of the time they have identical measures) and promote team-based focus and goal alignment. Additionally, the authors find that the performance sensitivity of these cash bonuses is about ten times greater than previously thought (ibid). More often than not, firms use absolute measures as

opposed to relative measures (Edmans et al., 2017) and the use of multi-year accounting performance may be rising (Li & Wang, 2016).

There is also growing body of research on the determinants of specific performance metrics in the executive compensation contract. Cronqvist and Fahlenbrach (2013) give some insight as they find that when a private equity fund takes over a firm, executive compensation contracts are redesigned away from qualitative, non-financial as well as earnings-based metrics and instead replaced with cash-flow based metrics. The authors surmise that this may limit the executives' ability to exercise discretion in accounting choices (ibid). De Angelis & Grinstein (2015) find that firms use a wide array of measures but that firms in the same industry tend to use similar metrics. Larger firms use market-based measures more frequently and firms that have reached maturity tend to rely on accounting metrics (ibid). Bettis, Bozjak, Coles & Kalpathy (2015) examine the vesting provisions of equity based incentives in executive compensation contracts and find that the use of performance vesting provisions increases with size and board independence amongst other features and, perhaps most importantly, is associated with a meaningful subsequent improvement in both accounting and stock performance suggesting that these features are effective in improving long-term performance.

The advent of the Balanced Scorecard in the 90's leads to a rise in the popularity of non-financial performance targets in executive compensation, the assumption being that such performance measures are leading indicators of future financial performance. (Kaplan & Norton, 1992). For example, O'Connell & O'Sullivan (2014) look at one non-financial measure in particular, customer satisfaction. The authors find that when customer satisfaction is deemed to be a good lead indicator to financial performance, it is included as a measure in executive compensation contracts, thus indicating good understanding of the firm's causal business model. Additionally, this also affects the relative weighting of the measure as an incentive tool in the contract (ibid).

From another perspective, there is an emerging line of research on the effect of financial targets in executive compensation on CSR performance. For example, Park & Chon (2015) examine how stock options affect a firm's CSR activity and find that it does appear to focus an executive's attention on future CSR activity. More recently, Minor's (2016) working paper makes an interesting proposition: that the CEO's treatment of the environment varies in relation to whether or not he or she is compensated with stock or stock options. The logic is this: stock grants

carry both upside and downside potential, but stock options carry only upside potential since the downside potential is not borne by the CEO, as he or she does not need to exercise the options (ibid). Consequently, he finds that this change in composition of CEO compensation results in a 60% increase in the odds that a firm will engage in environmental harm and that this harm will be double in magnitude to that of a CEO with only stock compensation (ibid). Finally, another recent example of a working paper in the area finds that firms treat CSR like a deposit to an insurance-like capital account from which they can draw on in the future (Dunbar, Li & Shi, 2016). As this account grows, it allows firms to grant CEO's incentives for additional risk-taking (ibid). The composition of the bonus plan matters.

### *2.2. CSR performance-based incentives in executive compensation*

Maas (2018) builds upon her previous descriptive work of CSR performance-based incentives (Maas & Rosendaal, 2016) to examine how the use of hard and soft targets within such incentives affect performance. Maas (2018) defines hard targets as those with clear-cut quantification while soft targets are those without such clear-cut quantification. This adds some clarity to Hong et al.'s (2016) work, in that it separates out two separate elements of CSR performance-based incentives, the hard and soft targets, and she finds that these do affect CSR performance differently. Like Hong et al. (2016), Maas (2018) examines a firm's motivation for using CSR incentives. However, she explores the possibility that a firm's previous CSR performance may affect its likelihood of adopting such incentives. As such, she examines whether poor CSR performance in the previous year affects the likelihood of adopting CSR incentives in the current year and examines the effect of the CSR incentives on performance. Finally, she posits that the use of hard (quantitative) or soft (qualitative) CSR incentives will affect performance differently and finds evidence this is the case. Maas show that a firm's prior year CSR performance does not affect the likelihood of adoption and effectively rules this out as an explanation. While she shows that the CSR incentives do influence CSR performance, disaggregated results reveal that this is driven entirely by the hard targets in the CSR incentives and the soft targets have no significant effect (ibid).

Haque (2017) takes a slightly different approach to examine how a sustainability-based compensation policy affects the carbon performance of a firm. Additionally, Haque examines some of the corporate governance features that support these incentives and performance. He finds

that both independence and gender diversity on the board are associated with reductions in carbon emissions, thus supporting the monitoring and advising roles of the board. Finally, he finds that the compensation policy is associated with carbon reduction initiatives (ibid).

Flammer, Hong & Minor (2019) examine the corporate governance features that are associated with CSR performance-based incentives but posit a different explanation than Maas (2018) for why firms may be motivated to use them. Specifically, the authors propose that CSR performance-based incentives are provided to focus a firm's attention to the stakeholders which are of most interest to the shareholders under the assumption that, if left to their own devices, management would pay attention to different stakeholders in line with their own interests and not those of the shareholders. The authors conclude that CSR performance-based incentives reduce managerial short-termism and increase firm value as well as increase CSR performance and green innovations while reducing emissions. The authors make the implicit assumption that the board understands the cause and effect nature of the relationship between specific stakeholders and, ultimately, firm performance and with this understanding, construct incentives based on those stakeholders which best serve the shareholders' interest, namely firm financial performance. Flammer et al. (2017) take a shareholder centric view of the firm and its motivations despite evidence that firms do in fact consider stakeholders (Rodrigue, Magnan & Boulianne, 2013). One final example comes from Abdelmotaal & Abdel-Kader (2016) who examine the use of CSR incentives on firm performance utilizing a dummy variable for CSR incentives. The authors proceed to examine firm characteristics and returns finding that, amongst other features, large firms and those with sustainability committees are more likely to offer CSR incentives; they also find evidence to support a positive effect on shareholder returns (ibid).

The work to date provides a solid beginning to understand the variety of determinants driving firms to use CSR performance-based incentives. What remains unclear however is whether knowledge transfer from directors plays a role here and how this may affect different sub-categories of CSR performance-based incentives. To further develop our understanding, I investigate how linking pin directors, and their experience, may influence the use of hard and soft targets as well as the use of only social performance-based incentives, only environmental performance-based incentives or a combination of the two.

### *2.2.1. Determinants of incentive use – linking pin directors*

As boards' tasks and responsibilities grow and become more complex, there is increasing reliance on the use of sub-committees. Some initial work has been done exploring the effect of knowledge transfer between committees. Kolev, Wangrow, Barker III & Schepker (2019) provide an overview of research relating to board committees and find that, on the topic of committee overlap, there is a dearth of research. Most of the work to date examines overlaps between the audit committee and the compensation committee. In these studies, directors that connect committees are referred to as 'linking pin' directors (e.g. Brandes, Dharwadkar & Suh, 2016). It is thought that these linking pin directors will transfer their knowledge between committees providing reduced information asymmetry and possible positive effects. Brandes et al. (2016) explore this overlap between the audit and compensation committees theorizing that it would reduce information asymmetry. The authors outline how these linking pin directors bring their knowledge from each committee to enhance the performance of the other and find support for the premise that these overlaps are important channels for knowledge transfer (ibid). Additionally, the authors find that these directors are associated with lower executive compensation and better monitoring effectiveness (ibid). Sassen, Stoffel, Berhmann, Ceschinski & Doan (2018) conduct a meta-analytic review of committee overlap relating to the compensation and audit committees. They find mixed results regarding the impact of committee overlap on the monitoring effectiveness of the board.

The development and evolution of the CSR Committee is relatively new, and we are still learning about why these committees are adopted, what these committees do, how they function and what spillover effects they may have onto the firm. Rodrigue, Magnan & Cho (2013) find that environmental committees are associated with a more symbolic approach to environmental governance rather than having a substantive effect on the firm. Peters and Romi (2014) examine the overlap of the CSR Committee with another board committee and find that disclosure of greenhouse gas emissions is more likely where there is overlap between the environmental and audit committee due to a knowledge spillover effect from the directors. Thus, despite their growing presence within boards of directors, there is still scant knowledge about CSR committees and their role in knowledge transfers.

*2.2.2. Determinants of incentive use – director experience*

There is extensive prior work on how a director's experience affects decisions on the board of directors. Directors are assigned a variety of duties depending on the committees they participate in. Broadly speaking, directors oversee and advise management (Armstrong, Guay & Weber, 2010). Boards vary greatly on the diversity of skills of their directors (Adams, Akyol & Verwijmeren, 2018). In this regard, director experience is very valuable to the firm as it provides another vehicle for knowledge transfer to the firm. Faleye, Hoitash & Hoitash (2018) find that firms with directors with industry experience have higher value, in part due to an ability to generate the same levels of patents as other firms but with lower R&D expenditures. Fedaseyeu, Linck & Wagner (2018) find that directors receive higher pay, and this is associated with their expertise being operationalized into greater use on the board of directors. However, Rodrigue, Magnan & Cho (2013) find that a director's environmental experience is mainly symbolic. As such, it is unclear what role a director's experience may play in the use of CSR performance-based incentives as granted by the compensation committee.

## 3. Theory and Hypotheses Development

*3.1. Linking Pin Directors and Committee Overlap*

Directors are screened, in part, for the board of directors by comparing the competencies they have with the perceived competencies required by the board of directors; in fact, boards are preparing and disclosing these matrices with increasing frequency (EY Center for Board Matters, 2019). Competencies are defined by Lawson, Blocher, Brewer, Cokins, Sorensen, Stout, Sundem, Wolcott & Wouters (2014) as

> "the set of knowledge, skills, and abilities required for professional success ... *Knowledge* is the intellectual content …, *skills* are the capacity to apply the knowledge to achieve specific goals and objectives, and *abilities* are the application of knowledge and skills in a professional work environment" (p. 296).

Of interest here are the competencies of the directors in applying knowledge of CSR in a compensation environment. The organizational behaviour literature refers to this as 'knowledge transfer' where it is studied extensively. Argote and Fahrenkopf (2016) refer to knowledge transfer as "the process through which one social unit learns from or is affected by the experience of

another unit" (p. 146). The authors outline that such knowledge transfer occurs more easily within an organization or where organizational contexts are similar and with much more difficulty between organizations (ibid). While the authors outline a model that includes members, tasks and tools, here the focus of interest are the members, or directors in this context. There are a variety of theoretical models that have been posed on knowledge transfer. By having directors who sit on multiple committees, boards may reduce their information asymmetry with management. These directors may facilitate knowledge transfer between committees, and this may have a positive effect on various aspects of the boards functioning. For example, Brandes et al. (2016) find that such linking pin directors between the audit committee and the compensation committee do reduce information asymmetry and are an important channel for knowledge transfer. Given that the development of CSR Committees is relatively new, and growing, it is possible that linking pin director overlap with the compensation committee may be associated with the use of CSR performance-based incentives as an intersection of CSR and compensation. In a similar vein, Peters and Romi (2014) find a knowledge spillover effect between the environmental and audit committees and as such, we may find the same here. Firms are under no obligation to cross-post directors on either the compensation or CSR committee and so it is likely that these choices are, on average, intentional. In the context of complex business environments, dealing with CSR and increased scrutiny on compensation, having directors sit on both the CSR and compensation committees may increase the knowledge transfer and thus be associated to a greater extent with the use of effective (hard) CSR performance-based incentives.

However, Rodrigue, Magnan & Cho (2013) find that environmental committees are more symbolic and consequently may not have sufficient knowledge to spillover to the compensation committee. Additionally, a metanalytic review of committee overlap between the audit and compensation committees find mixed results when exploring the effect of such overlap on monitoring effectiveness; further, some research has found a negative effect from committee overlap on firm performance in certain circumstances (Sassen et al., 2018). It is possible, that these negative effects could manifest in biases against CSR performance-based incentives.

In contrast to the knowledge transfer approach, it is possible that the CSR committees are symbolic and may not have sufficient knowledge to transfer with the compensation committee consistent with an organized hypocrisy approach. Within an organized hypocrisy perspective (Brunsson, 1989; Cho, Laine, Roberts, Rodrigue, 2015), firms may make decisions that appear to

be inconsistent, in this case having a CSR committee with shared members on the compensation committee but because the CSR committee may not be substantive, there is no significant knowledge to transfer. Under this perspective, I would expect either no relationship with the use of effective CSR performance-based incentives or a relationship with ineffective incentives. While it has been well documented that firms engage in hypocritical activities, it is unlikely that this is the case for all firms at all times. Given that previous work (Brandes et al, 2016; Peters & Romi, 2014) has found a positive relationship between committee overlap and knowledge transfer, I predict that the knowledge transfer approach will dominate in these circumstances helping us to differentiate between those engaged in organized hypocrisy. As such, I predict the following:

*H1: Effective CSR performance-based incentives are more likely to be used in firms where directors sit on both the CSR Committee and the Compensation Committee within the same firm.*

*H2: Effective CSR performance-based incentives are more likely to be used in firms where directors sit on the Compensation Committee at the firm of interest and a CSR Committee elsewhere.*

A director's experience has a direct, positive effect on the board and committees (e.g. Carcello, Hermanson & Ye, 2011). A director's experience is sought after and given the tumultous times we are in as it relates to CSR, with greater calls for attention in this area, a director's experience in this regard may be more valuable. Walls & Hoffman (2013) find that environmental experience is positively associated with environmental practices that go above and beyond the minimum. Further, taking a resource-based view, Cowden, Alhorr & Bendickson (2015) find that the environmental experience of board members contributes positively to the firm's environmental performance. Additionally, while the use of CSR performance-based incentives are used throughout many industries, firms in environmentally sensitive industries (ESI) are associated to a greater extent with the use of these incentives (Maas & Rosendaal, 2016). To this end, to reduce information asymmetry and respond to stakeholders' demands to address a firm's corporate social responsibility, directors with greater levels of experience in environmentally sensitive industries may transfer this knowledge to the board. If the knowledge transfer perspective is true, I would

expect to see a positive relationship between past ESI experience and the use of effective (hard) CSR performance-based incentives.

In contrast, experience in the ESI may be associated to a greater extent with hypocritical activities (Rodrigue, Magnan & Cho, 2013; Cho, Laine, Roberts & Rodrigue, 2015). This experience may not bring anything of value to the firm of interest in terms of setting compensation based on CSR objectives. Worse, this could in fact be associated with greater use of ineffective CSR performance-based incentives. This is consistent with a long line of research about firms activities being mainly to legitimize themselves and not for substantive effect (e.g Patten, 2019). Consequently, I would expect to see either no relationship with the use of effective CSR performance-based incentives or a positive relationship with the use of ineffective CSR performance-based incentives. On the balance of the two theories, I predict that given the increased scrutiny in the area and recent findings on environmental experience, that when these directors sit on the compensation committee, this knowledge may spillover into greater use of effective CSR performance-based incentives. To that end, I predict:

*H3: Effective CSR performance-based incentives are more likely to be used where directors have experience in the ESI.*

## 4. Method

### *4.1. Sample*

The study focuses on S&P 500 firms. I obtained the 2015 proxy statements for each firm in the S&P 500 and then hand collect the CSR performance-based incentive data from the Compensation Discussion & Analysis (CD&A) section of the statement. This section details the use of such incentives during the previous year (2014). This provides an initial starting sample of 505 firms. To test the hypotheses quantitatively I use binary logistic regression in SAS.

*4.2. Empirical Model*

To test the first two hypotheses, the empirical model is as follows:

$$CSR\_INC = B_0 + B_1 * OVERLAPIN + B_2 * OVERLAPOUT + \text{controls} + \varepsilon,$$

where *OVERLAPIN* is a dummy variable representing a firm where at least one director sits on both the CSR and compensation committees and *OVERLAPOUT* represents a firm where the directors sit on the compensation committee at the firm of interest but also sits on a CSR committee at another firm. I then repeat the regressions replacing *CSR_INC* with *CSR_HARD* and *CSR_SOFT* to determine if any effect is only on hard or soft metrics. I then repeat the process again, replacing the dependent variable with *SOC_HARD*, *SOC_SOFT*, *ENV_HARD*, *ENV_SOFT*, *SOCENV_HARD* and *SOCENV_SOFT*.

The second empirical model testing H3 is as follows:

$$CSR\_INC = B_0 + B_1 * OVERLAPIN + B_2 * OVERLAPOUT + B_3 * ESI\_EXP + \text{controls} + \varepsilon,$$

where *ESI_EXP* is a variable representing the maximum number of boards in the ESI the director with the most experience on the compensation committee has. All regressions are run using the generic category of CSR performance-based incentives and then re-run to test the social, environmental and combined incentives. Maas (2018) differentiate between hard and soft targets by distinguishing between those firms with and without clear-cut quantification[6]. Upon review of the data, there appear to be at least five different categories of targets: a) those that include an explicit target for the social and/or environmental CSR performance-based incentive either individually or grouped (e.g. 10% for safety target or 30% for safety combined with other non-financial, non CSR-related goals), b) explicit use of CSR goals to modify the bonus upwards without a formal % (e.g. the board considered specific diversity improvements to increase the bonus upwards by 10%), c) those that include consideration of a CSR concept but no clear modification upwards or downwards, d) use of CSR as a negative solely with downward potential

[6] Maas (2018) gives as examples: hard – clear-cut quantification (e.g. reduction of $CO_2$ emissions *by 20%* next year) and soft – no clear-cut quantification (e.g. reduce $CO_2$ emissions next year) (emphasis added).

(e.g. unnamed CSR goals were not met and therefore the bonus was reduced) and e) reference made to CSR concepts but no breakdowns were provided for any of the bonus elements. For purposes of this study, I use the first category (a) as a restrictive definition of a 'hard' metric and re-run all the regressions using a broader, more general definition of 'hard' incorporating both of the first two categories (a & b). Consequently, 'soft' metrics are interpreted as including all categories except the first in the most restrictive definition of 'hard' (b, c, d & e) and in the more general definition, 'soft' includes the last three categories (c, d & e).

### *4.3. Variable Construction*

Since the necessary data for the CSR performance-based incentives is currently unavailable in major databases, I hand collect this data from the Definitive Proxy Statement (DEF 14A) for all of the S&P 500 companies listed for the year 2015 which provides the details, in varying formats, of whether or not social and/or environmental performance-based incentives were provided in the previous year.

*CSR performance-based incentives (CSR_INC)* – If the use of CSR performance-based incentives is present, a dummy variable of 1 is used while 0 is used if no CSR performance-based incentives are present.

*CSR_HARD* – A dummy variable of 1 is used to indicate the presence of a hard CSR performance-based metric in the short-term incentive plan. I utilize two versions of hard variables. The first takes a more restrictive interpretation and as such an '*R*' is added to the variable descriptor (e.g. *CSR_HARDR*). In this case, the '*R*' indicates that a formal % weighting in the plan for a social and/or environmental metric (e.g. 10% weighting for specific safety target) is provided or that an explicit social and/or environmental weighting is provided but is grouped with other elements (e.g. 30% of the bonus is for items including social and/or environmental metrics, but no specific breakdown is provided for the social and/or environmental proportion). This is in contrast to the use of a '*G*' which denotes a broader interpretation of hard (e.g. *CSR_HARDG*). In this interpretation, the '*G*' indicates a hard metric as defined in *CSR_HARDR* but also includes those cases where the CSR performance-based incentive is explicitly used as a modifier (e.g. the performance on social and/or environmental goals was used to increase/decrease the bonus by 10%

or if the board indicated the social and/or environmental goals formed an important role in the determination of the bonus).

*CSR_SOFT* – A dummy variable of 1 is used to indicate the presence of a soft CSR performance-based metric in the short-term incentive plan. Again here the two letters added to the end signify a restrictive '*R*' interpretation or '*G*' broader interpretation as described above (e.g. *CSR_SOFTR* or *CSR_SOFTG*). Specifically, a 1 indicates that the plan does not contain a hard social and/or environmental metric as defined in the restrictive definition above. In the restrictive setting, the soft CSR performance-based incentives include: a) those cases where a modifier is applied as in *CSR_HARDG*; b) where the board considers social and/or environmental performance in determining the bonus but provides no specific modifiers or made no modifications based on this performance; c) metrics where the CSR performance-based incentives is used solely as a negative without any potential for upwards adjustments (stick vs. carrot); and d) where the discussion references CSR elements but the plan provides no breakdown for any elements in the plan. For the 'G' version, a 1 indicates that the plan does not contain a hard social and/or environmental metric as defined in the broad definition above. In the broad setting, the soft CSR performance-based incentives include: b) where the board considers social and/or environmental performance in determining the bonus but provides no specific modifiers or made no modifications based on this performance; c) metrics where the CSR performance-based incentives is used solely as a negative without any potential for upwards adjustments (stick vs. carrot); and d) where the discussion references CSR elements but the plan provides no breakdown for any elements in the plan.

*SOC_INC* – A dummy variable where 1 indicates that ONLY social incentives (e.g. safety, diversity) are being used.

*ENV_INC* – A dummy variable where 1 indicates that ONLY environmental incentives (e.g. greenhouse gas emissions) are being used.

*SOCENV_INC* – A dummy variable where 1 indicates that both social AND environmental incentives (e.g. safety, diversity, greenhouse gas emissions) are being used.

The hard, soft, 'R' and 'G' notations are also applied to each category of incentive (e.g. *SOC_HARDR*, *SOC_HARDG*, etc.)

*ESI_EXP* – I first determine all members of the compensation committee for each firm in the sample from BoardEx. Then, I match each director's unique id to all boards of directors that the director has sat on for the previous five-year period (2009-2013). I determine which of those firms are in the ESI and calculate a cumulative experience score by granting 1 point for each ESI board the director has sat on in the past five years. This information is compiled and the maximum score for the firm in my sample is used as a proxy for environmental experience. For example, if a director sat on four boards in the ESI beyond the target firm in the past five years, this director would receive four points. In examining the compensation committee of the target firm, if one director had an ESI experience score of 1, and another director had an experience score of 4, the score of 4 would be used as the *ESI_EXP* variable in the regression.

*CSR Performance* – I utilize the social disclosure score for 2014 (*SOC_SCORE_2014*) from Bloomberg to proxy for social performance, the environmental disclosure score for 2014 (*ENV_SCORE_2014*) from Bloomberg to proxy for environmental performance.

*OVERLAPIN* – A dummy variable where 1 indicates that at least one director on the board sits on both the CSR Committee AND the Compensation Committee at the firm of interest; this information is obtained from BoardEx.

*OVERLAPOUT* – A dummy variable where 1 indicates that at least one director on the board sits on the Compensation Committee at the firm of interest AND sits on a CSR Committee at another firm.

*Shareholders (ST_OWN & LT_OWN)* – I obtain shareholder data from FactSet and use the categories 'hedge fund ownership' for a short-term view institutional shareholder proxy and 'pension fund ownership' is used as a proxy for long-term view institutional shareholder proxy.

Other variables – *FF_Peer_Pressure* is calculated following Keddie (2019): each firm in the S&P 500 is categorized using the Fama-French 12 industry codes. Next, the number of firms using CSR performance-based incentives within each industry code is determined and this is divided by the total number of firms within the industry. For firms already using CSR performance-based incentives, these were subtracted from the industry total. These percentages represent the pressure firms face to conform to their peers and use CSR performance-based incentives. Size is log revenue (*LN_REV*), obtained from Compustat Capital IQ. *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not.

## 5. Results

### *5.1. Sample and descriptive statistics*

The initial sample comprises a total of 505 firms. However, due to dual listings and missing information, the sample is reduced to 487 unique firms. Table 21 shows that of these firms, 164 (33.68%) used only financial metrics in the short-term incentives plan, 163 (33.47%) used non-financial metrics other than CSR performance-based incentives and 160 (32.85%) used some form of CSR performance-based incentive. Table 22 breaks the CSR performance-based incentives down further with 95 of the 160 (59.38%) using only social indicators, 6 (3.75%) using only environmental indicators and the remaining 59 (36.88%) using a combination of social and environmental indicators.

<Insert Tables 21 and 22 about here>

Table 23 provides sample statistics. *CSR_INC* has a mean of 0.33 while *CSR_HARDR* has a mean of 0.15 and *CSR_HARDG* has a mean of 0.22. *OVERLAPIN* has a mean of 0.12 while *OVERLAPOUT* has a mean of 0.05. The mean *ESI_EXP* is 0.74.

There are significant differences between many of the variables when a two-sample t-test is performed. Table 24 shows that firms using CSR performance-based incentives are significantly different than those without on a number of key variables including *OVERLAPIN* (dif. -0.18, p-

value <0.01), *OVERLAPOUT* (dif. -0.05, p-value <0.05), ESI_EXP (dif. -0.48, p-value <0.01) *ENV_SCORE_2014* (dif. -9.52, p-value <0.01) and *SOC_SCORE_2014* (dif. -9.79, p-value <0.01). Some differences emerge in the use of hard and soft metrics as well, for example, there is a significant difference *OVERLAPIN* (dif. -0.22, p-value <0.01) in the use of hard metrics but not for soft metrics.

Table 25 breaks down these differences further by CSR performance-based incentive type. Here we see again differences emerging between the two groups, for example, *OVERLAPIN* is significantly different for *SOC_INC* (dif. -0.10, p-value <0.05) and *SOCENV_INC* (dif. -0.21, p-value <0.01) but not for *ENV_INC*.

<Insert Tables 23, 24 and 25 about here>

Figure 5 shows the use of CSR performance-based incentives throughout the twelve identified Fama-French industry categories. It is apparent that these incentives are used throughout a variety of industries but do appear to be used with greater frequency in finance, utilities and the oil and gas extraction industries.

<Insert Figure 5 about here>

### *5.2. Pearson Correlation Table*

The Pearson correlation table in Table 26 does reveal a number of variables with correlations exceeding 0.8, an indicator of multicollinearity. The regression models are tested for the variance inflation factors (VIFS) and none of the VIFs exceed 3.36 (untabulated) which is below the standards of 5 for moderate multicollinearity and well below 10 which is the benchmark for high multicollinearity.

### *5.3. Binary logistic regression*

The Hausman specification test conducted confirms that a binary regression technique is efficient for the study (untabulated). Table 27 shows the results from the first four model equations exploring the first two hypotheses. Where *CSR_INC* are used generally, Model 1, we see that the estimate for *OVERLAPIN* is significant (1.45, p-value 0.04), which is consistent with the

knowledge transfer prediction in H1. However the estimate for *OVERLAPOUT* is not significant (-0.39, p-value 0.60). Breaking this down further by examining the use of hard CSR performance-based incentives, Model 2, with the dependent variable *CSR_HARDR* also shows *OVERLAPIN* as significant (2.12, p-value 0.01). These results are consistent when replacing the dependent variable with *CSR_HARDG* (where the criteria for hard is interpreted more broadly) (*OVERLAPIN:* 1.77 p-value 0.01). In Model 4, which has CSR_SOFTR as dependent variable, *OVERLAPIN* loses its significance (-0.04 p-value 0.48). *FF_Peer_Pressure*, *ESI* and *LN_REV* are significant and positive in the first three models but again, not in the model using the soft incentives (dependent variable *CSR_SOFTR*). The previous year's environmental score (*ENV_SCORE_2014*) is significant and positive (0.02 p-value 0.10) for the dependent variable *CSR_INC* and also *CSR_SOFTR* (0.03 p-value 0.01). The model using *CSR_SOFTG* is not significant and is untabulated. Table 28 shows that the first three models show strong levels of concordance (77.5%, 81.4% and 77.8%). Model 4 is slightly less with and 67.7% concordant. Overall, the generic CSR performance-based model as well as the hard models show significant and positive associations with directors who sit on both the CSR and compensation committees within the same; the soft CSR performance-based model shows no significant results and there are no significant results for directors who sit on the compensation committee at the firm of interest as well the CSR committee at a firm elsewhere.

<Insert Table 27 and 28 about here>

Table 29 shows the results from the regressions using social performance-based incentives as the dependent variables exploring the first two hypotheses by breaking down the incentives into their sub-categories. In Model 1, with a dependent variable based on hard social performance-based incentives (*SOC_HARDR*) we see that the estimate for *OVERLAPIN* is not significant and neither is the estimate for *OVERLAPOUT*. Further, in Model 2, with the dependent variable *SOC_HARDG,* where the criteria for hard is interpreted more broadly, *OVERLAPIN* is positive and significant (2.33 p-value 0.02) consistent with the knowledge transfer prediction in H1. *OVERLAPOUT* remains insignificant for all models tested here. Again, *OVERLAPIN* loses its significance when looking at the use of soft social performance-based incentives in models 3 and 4. *LN_REV* is only significant for the soft models (*SOC_SOFTR* and *SOC_SOFTG*) (0.28, p-

value 0.06; 0.36, p-value 0.07) as is *ENV_SCORE_2014* (0.03 p-value 0.01; 0.04 p-value 0.03). Conversely, *FF_Peer_Pressure* (7.88, p-value 0.06) and *ESI* (1.14, p-value 0.01) are significant and positive for *SOC_HARDR*; *ESI* remains significant for *SOC_HARDG* (0.82, p-value 0.02). Of note, *ESI* becomes significant and negative for *SOC_SOFTG* (-1.00 p-value 0.10). Table 30 shows that models 1 & 4 are robust while models 2 & 3 show slightly lower levels of robustness but are still acceptable. Overall, directors who sit on the CSR committee and compensation committee within the same firm are positively associated with the use of hard social performance-based incentives; both the soft models and directors who sit on the compensation committee at the firm of interest and the CSR committee elsewhere are not significant.

<Insert Table 29 and 30 about here>

Table 31 continues to explore H1 and H2 by breaking down the CSR performance-based incentives into their sub-categories. Due to the limited number of observations for environmental CSR performance-based incentives (3 observations used in the regression), it is difficult to come to any meaningful conclusions. Overall, neither the *ENV_HARDR* nor the *ENV_SOFTR* show any significance for the key variables *OVERLAPIN* or *OVERLAPOUT* in Table 31. However, *LT_OWN* is significant and positive (0.69 p-value 0.04) indicating possible focused pressure on firms to use soft, environmental performance-based incentives. The models using *ENV_HARDR* and *ENV_SOFTG* were not significant and are untabulated.

While both models (*SOCENV_HARDR* and *SOCENV_HARDG*) show *OVERLAPIN* and *OVERLAPOUT* as positive in the predicted direction, only the more broadly interpreted definition of hard social and environmental performance-based incentives (*SOCENV_HARDG*) show *OVERLAPOUT* as significant (1.38 p-value 0.06) consistent with the knowledge transfer prediction in H2. Contrary to the use of *ENV_SOFTR*, here *LT_OWN* is significant and negative (-0.57 p-value 0.06). *FF_Peer_Pressure* is significant only for *SOCENV_HARDG* (8.81, p-value 0.04), but both *ESI* (2.86, p-value <0.01; 2.44, p-value <0.01) and *LN_REV* (0.52, p-value 0.02; 0.49, p-value 0.02) are significant for models 3 and 4 respectively. The models using *SOCENV_SOFTR* and *SOCENV_SOFTG* were not significant and are untabulated. Table 32 shows that the models are robust. Caution is warranted though for the environmental incentives as the number in the sample is very small. Overall, only directors who sit on the compensation

committee at the firm of interest and a CSR committee elsewhere are positively associated with the use of both hard social and environmental performance-based incentives.

<Insert Table 31 and 32 about here>

Tests for H3 begin in Table 33 where the initial regression using *CSR_INC* do not show significant results however, when this is broken down further, ESI_EXP is significant and positive in the predicted direction for knowledge transfer for both *CSR_HARDR* (0.29, p-value 0.04) and *CSR_HARDG* (0.27, p-value 0.04). *OVERLAPIN* remains significant and positive for the first three models (1.31, p-value 0.03; 2.14, p-value 0.01; 1.71, p-value 0.01) however loses its significance in the soft model *CSR_SOFTR*. *OVERLAPOUT* is not significant for any models shown. For the first three models, *FF_Peer_Pressure* (10.21, p-value 0.00; 8.52, p-value 0.02, 10.10, p-value 0.00), *ESI* (1.27, p-value <0.01; 2.01, p-value <0.01; 1.53, p-value <0.01)and *LN_REV* (0.36, p-value 0.01; 0.31, p-value 0.07; 0.30, p-value 0.04) are all significant and positive. Only *LN_REV* retains its significance in the *CSR_SOFTR* model (0.23, p-value 0.10); in this model *ENV_SCORE_2014* is also significant and positive (0.03, p-value 0.02). Table 34 shows the models are generally robust while the fourth model is slightly less robust but still acceptable. Overall, director experience in the ESI is associated with the use of hard CSR performance-based incentives; directors who sit on both the compensation committee and CSR committee within the same firm are still positively associated with the use of CSR performance-based incentives, this is driven by the use of hard incentives.

<Insert Table 33 and 34 about here>

Finally, table 35 shows positive and significant results for the key H3 variable, *ESI_EXP* in relation to dependent variables *SOC_HARDR* (0.27, p-value 0.08), *SOC_HARDG* (0.32, p-value 0.02), *SOCENV_HARDR* (0.31, p-value 0.09). This is consistent with the knowledge transfer perspective. Of note, *SOCENV_SOFTR* shows a significant and negative relationship to *ESI_EXP* (-0.54, p-value 0.07) and is insignificant for *SOCENV_HARDG*. *OVERLAPIN* retains its significance only for *SOC_HARDG* (2.14, p-value 0.03) while *OVERLAPOUT* is significant for *SOCENV_HARDG* (1.38, p-value 0.07). *LT_OWN* is significant and negative for

*SOCENV_HARDG* (-0.53, p-value 0.08) similar to the earlier model without *ESI_EXP*. Table 36 shows all models are robust. Overall, a director's experience in the ESI is positively associated with the use of hard social as well as hard social and environmental performance-based incentives and negatively associated with the use of soft social and environmental performance-based incentives. Directors sitting on both the compensation committee and CSR committee within the same firm continue to be associated with the use of hard social performance-based incentives while compensation committee directors who sit on a CSR committee elsewhere continue to be associated with the use of both hard social and environmental performance-based incentives.

Results are substantially consistent throughout. On the whole, the results suggest support for H1, firms where linking pin directors who sit on both the CSR and compensation committees are more likely to use CSR performance-based incentives. Specifically, these firms are more likely to use hard social performance-based incentives where directors sit on both committees within the same firm. For H2, where directors sit on the compensation committee at the firm of interest and on the CSR committee at a different firm, these firms are more likely to use both social and environmental hard CSR performance-based incentives at the same time. Finally, for H3, that a director's experience in environmentally sensitive industries may make it more likely that they will use CSR performance-based incentives, there is also support. The results for H1 and H2 are robust even when a director's experience is brought into the model suggesting two different modes of knowledge transfer are at play. It is interesting to note that overall, the knowledge transfer appears strong for hard CSR performance-based incentives but there is a clear delineation where there is no support for the soft CSR performance-based incentives. With regards to soft social and environmental incentives in fact, a director's experience in the ESI is clearly negatively associated indicating a possible application of knowledge to avoid the use of such soft incentives.

## 6. Robustness Tests

It is possible that the results found may be affected by the presence or absence of independent directors on the board. I re-run all the regressions but find only limited circumstances where independent directors have an effect. Specifically, for the use of both social and environmental hard (with the restrictive definition) performance-based incentives, independent directors are negatively associated with the use of these and *OVERLAPOUT* is now significant and

positive at the 10% level both with and without controlling for director environmental experience (untabulated). All other results remain substantially similar.

It is also possible that particular compensation consultants may be responsible for the use of CSR performance-based incentives or particular sub-categories of use as examined here. Therefore, I re-run all the regressions including dummy variables for all of the compensation consultants for all firms. The results (untabulated) do not show any association between any of the compensation consultants and the dependent variable tested.

## 7. Discussion

The results show support for hypotheses that directors' knowledge is associated with the use of CSR performance-based incentives. This knowledge spills over when the directors sit on both the CSR committee and the compensation committee to influence the use of CSR performance-based incentives and is supported with the analyses. What the data shows is that when directors sit on these committees within the firm, there is a significant influence to use hard CSR performance-based incentives. This effect appears to be solely driven by the use of hard social CSR performance-based incentives. It is possible that this is due to greater knowledge of the firm's social needs since the director sits on both committees within the same firm; this knowledge may press the director to push for further social change within the firm and to insist upon the use of hard social targets in the executive compensation contract to achieve this. Additionally, the data show that when directors sit on the compensation committee in the target firm but sit on a CSR committee elsewhere, these directors are associated with the use of hard social and environmental incentives within the target firm. By sitting on a CSR committee elsewhere, the directors may be bringing in a broader view of CSR and pressing for the use of hard social and environmental incentives at the same time. Finally, a director's experience in environmentally sensitive industries is associated positively with the use of hard incentives and negatively with the use of soft incentives suggesting active engagement by the directors on the subject. The results show support for the information knowledge transfer perspective as opposed to the organized hypocrisy perspective; a director's knowledge supports the use of effective CSR performance-based incentives.

## 8. Conclusions and Future Research

We are only beginning to understand the determinants of CSR performance-based incentives. This research has shown that linking pin directors can be critical to the use of such incentives by facilitating knowledge transfer both within and between firms. Additionally, the more experience a director has in the ESI, the greater the likelihood the firm will use CSR performance-based incentives suggesting additional knowledge transfer. This suggests that directors have an important role to play in the use of CSR performance-based incentives.

It is interesting to note that while we are learning more about what is associated with the use of hard incentives, our knowledge of soft incentives is lacking. Related to this, it's curious that the firm's past environmental performance score is associated with CSR performance-based incentives broadly, but broken down this appears to be driven by the soft incentives only. It is warranted to investigate further as to why this is as it may reveal a weakness in the rating systems for these firms.

This research will be of interest to boards of directors as they navigate the use of these incentives as well as in the design of their committees. Given that the research is showing knowledge transfer vis-à-vis committee overlap, boards should give this serious consideration in terms of how and where the firm needs such overlap. A board that chooses to provide CSR performance-based incentives may be well served by ensuring that some of the members of the compensation committee also sit on the CSR committee. Should a CSR committee not already exist, it may be a worthwhile exercise to create one for the purposes of monitoring CSR more closely. Regulators and shareholders may be interested in additional disclosure about how the CSR performance-based incentives have come to be in the compensation plan and what supports their use. Greater scrutiny of the substance of such incentives may provide additional information to assess whether or not they are appropriate and/or effective given the firm's circumstances.

This research is subject to certain limitations. Given the dearth of research on CSR performance-based incentives, it is possible that some of the effects found are actually from correlated omitted variables. Further research will help to refine the associated factors.

Future research should examine the materiality of the metrics chosen as well as how the weighting of these metrics in the overall plan plays a role in the performance of the firm. Additionally, given the fuzzy definitions around determining soft and hard metrics, it would be interesting to further delineate different categories and determine the performance effect of these.

Further, exploring any changes that have occurred over time and whether or not firms are beginning to incorporate such concepts as the UN Sustainable Development goals into their plans would also be interesting. Additionally, determining what kinds of businesses are using these incentives and how they may be using them differently categorizing firms by low or high carbon may also be helpful to understand how these incentives may contribute (or not) to movement towards a low carbon economy. It would be interesting to investigate why firms choose to use solely social- or environmental-based incentives in the executive contract as opposed to a combination and what effect this has on CSR performance and financial performance. Furthering the work on knowledge transfer, additional investigation into the mechanisms of knowledge transfer would be fruitful. In particular, investigating more deeply the model put forth by Argote & Fahrenkopf (2016), members, tasks and tools, would help to gain a deeper understanding of what facilitates this knowledge transfer and what inhibits it as well as looking at the performance effects of each. Finally, an interesting takeaway from this research is that the results for the models examining the use of soft incentives were consistently less robust than those using hard incentives suggesting that there is a difference in the determinants of these types of incentives specifically. Future research could further examine some of these differences to help to better delineate those metrics with a positive effect, and those that are perhaps ineffective at best, and 'greenwashing' at worst.

**Tables and Figures**

*Table 21: Descriptive data incentive plans*

| | Number | % of total (#/487) |
|---|---|---|
| **Companies with *only financial* metrics in bonus plans** | 164 | 33.68% |
| **Companies with non-financial metrics (but not CSR performance-based metrics)** | 163 | 33.47% |
| **Companies with CSR performance-based incentives in bonus plans** | 160 | 32.85% |
| | **487** | **100.00%** |

*Table 22: Descriptive data CSR performance-based incentives*

| | Number | % of total (#/160) |
|---|---|---|
| **Bonus plans with only social indicators** | 95 | 59.38% |
| **Bonus plans with only environmental indicators** | 6 | 3.75% |
| **Bonus plans with both social and environmental indicators** | 59 | 36.88% |
| | **160** | **100.00%** |

*Table 23: Simple Statistics*

| Variables | N | Mean | Std Dev | Min | Max |
|---|---|---|---|---|---|
| **CSR_INC** | 487 | 0.33 | 0.47 | 0 | 1 |
| **CSR_HARDR** | 487 | 0.15 | 0.36 | 0 | 1 |
| **CSR_HARDG** | 487 | 0.22 | 0.42 | 0 | 1 |
| **CSR_SOFTR** | 487 | 0.17 | 0.38 | 0 | 1 |
| **SOC_HARDR** | 487 | 0.08 | 0.27 | 0 | 1 |
| **SOC_HARDG** | 487 | 0.13 | 0.34 | 0 | 1 |
| **SOC_SOFTR** | 487 | 0.11 | 0.32 | 0 | 1 |
| **SOC_SOFTG** | 487 | 0.07 | 0.25 | 0 | 1 |
| **ENV_HARDG** | 487 | 0.01 | 0.08 | 0 | 1 |
| **ENV_SOFTR** | 487 | 0.01 | 0.10 | 0 | 1 |
| **SOCENV_HARDR** | 487 | 0.08 | 0.26 | 0 | 1 |
| **SOCENV_HARDG** | 487 | 0.09 | 0.28 | 0 | 1 |
| **SOCENV_SOFTR** | 487 | 0.05 | 0.22 | 0 | 1 |
| **OVERLAPIN** | 487 | 0.12 | 0.32 | 0 | 1 |
| **OVERLAPOUT** | 487 | 0.05 | 0.21 | 0 | 1 |
| **LT_OWN** | 475 | 3.37 | 1.16 | 0.48 | 10.35 |
| **ST_OWN** | 475 | 5.24 | 5.94 | 0.17 | 49.33 |
| **FF_PEER_PRESSURE** | 487 | 0.09 | 0.05 | 0.01 | 0.18 |
| **CSR_COMM** | 487 | 0.16 | 0.37 | 0 | 1 |
| **ESI** | 487 | 0.25 | 0.43 | 0 | 1 |
| **LN_REV** | 481 | 9.18 | 1.20 | 6.24 | 13.09 |
| **ENV_SCORE_2014** | 347 | 28.10 | 18.48 | 0 | 75.97 |
| **SOC_SCORE_2014** | 416 | 28.06 | 15.67 | 3.33 | 77.19 |
| **ESI_EXP** | 455 | 0.74 | 1.01 | 0 | 6 |

*Table 24: Two Sample t-tests Split by CSR Performance-Based Incentive Use*

| | CSR_INC Means | | | | CSR_HARDR Means | | | | CSR_SOFTR Means | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **0** | **1** | **Dif.** | **t-value** | **0** | **1** | **Dif.** | **t-value** | **0** | **1** | **Dif.** | **t-value** |
| **OVERLAPIN** | 0.06 | 0.24 | -0.18 | -4.86*** | 0.09 | 0.31 | -0.22 | -4.01*** | 0.11 | 0.18 | -0.07 | -1.57 |
| **OVERLAPOUT** | 0.03 | 0.08 | -0.05 | -2.14** | 0.04 | 0.11 | -0.07 | -1.90* | 0.04 | 0.06 | -0.01 | -0.55 |
| **LT_OWN** | 3.35 | 3.39 | -0.04 | -0.40 | 3.38 | 3.31 | 0.07 | 0.74 | 3.35 | 3.47 | -0.13 | -0.90 |
| **ST_OWN** | 5.80 | 4.64 | 1.17 | 2.37** | 5.52 | 4.92 | 0.60 | 1.01 | 5.64 | 4.40 | 1.25 | 2.39** |
| **FF_PEER_PRESSURE** | 0.08 | 0.11 | -0.02 | -5.05*** | 0.09 | 0.12 | -0.03 | -6.09*** | 0.09 | 0.10 | -0.01 | -0.95 |
| **CSR_COMM** | 0.10 | 0.28 | -0.18 | -4.49*** | 0.13 | 0.33 | -0.20 | -3.53*** | 0.15 | 0.24 | -0.09 | -1.79* |
| **ESI** | 0.14 | 0.49 | -0.35 | -7.95*** | 0.17 | 0.68 | -0.51 | -8.81*** | 0.24 | 0.32 | -0.08 | -1.52 |
| **LN_REV** | 8.99 | 9.56 | -0.57 | -5.00*** | 9.11 | 9.51 | -0.40 | -2.64*** | 9.09 | 9.60 | -0.51 | -3.59*** |
| **ENV_SCORE_2014** | 24.40 | 33.92 | -9.52 | -4.83*** | 27.37 | 31.40 | -4.02 | -1.57 | 26.00 | 36.13 | -10.13 | -4.24*** |
| **SOC_SCORE_2014** | 24.76 | 34.55 | -9.79 | -6.29*** | 26.85 | 34.69 | -7.84 | -3.74*** | 26.63 | 34.43 | -7.80 | -3.99*** |
| **ESI_EXP** | 0.59 | 1.07 | -0.48 | -4.81*** | 0.62 | 1.45 | -0.83 | -6.58*** | 0.75 | 0.72 | 0.02 | 0.18 |

*Table 25: Two Sample t-tests Split by CSR Performance-Based Incentive Type*

| | SOC_INC Means | | | | ENV_INC Means | | Dif. | t-value | SOCENV_INC Means | | Dif. | t-value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VARIABLE** | **0** | **1** | **Dif.** | **t-value** | **0** | **1** | | | **0** | **1** | | |
| **OVERLAPIN** | 0.10 | 0.20 | -0.10 | -2.29** | 0.12 | 0.17 | -0.05 | -0.36 | 0.09 | 0.31 | -0.21 | -3.41*** |
| **OVERLAPOUT** | 0.05 | 0.04 | 0.01 | 0.26 | 0.05 | 0.00 | 0.05 | 4.91*** | 0.03 | 0.15 | -0.12 | -2.50** |
| **LT_OWN** | 3.36 | 3.40 | -0.04 | -0.40 | 3.35 | 5.10 | -1.75 | -3.73*** | 3.39 | 3.21 | 0.18 | 1.43 |
| **ST_OWN** | 5.64 | 4.51 | 1.13 | 2.17** | 5.44 | 3.85 | 1.60 | 0.65 | 5.49 | 4.92 | 0.57 | 0.92 |
| **FF_PEER_PRESSURE** | 0.09 | 0.10 | -0.01 | -2.06** | 0.09 | 0.12 | -0.03 | -1.67* | 0.09 | 0.12 | -0.03 | -4.36*** |
| **CSR_COMM** | 0.15 | 0.23 | -0.09 | -1.83* | 0.16 | 0.33 | -0.17 | -1.14 | 0.14 | 0.36 | -0.22 | -3.39*** |
| **LN_REV** | 9.08 | 9.58 | -0.51 | -3.74*** | 9.18 | 9.11 | 0.06 | 0.13 | 9.12 | 9.56 | -0.44 | -2.61*** |
| **ESI** | 0.22 | 0.37 | -0.14 | -2.92*** | 0.25 | 0.33 | -0.08 | -0.46 | 0.19 | 0.69 | -0.50 | -8.99*** |
| **ENV_SCORE_2014** | 26.75 | 32.47 | -5.72 | -2.47*** | 27.95 | 36.87 | -8.92 | -1.17 | 26.85 | 36.08 | -9.22 | -3.22*** |
| **SOC_SCORE_2014** | 27.16 | 31.40 | -4.34 | -2.30** | 27.86 | 41.19 | -13.32 | -2.08** | 26.60 | 39.19 | -12.58 | -5.41*** |
| **ESI_EXP** | 0.69 | 0.98 | -0.29 | -2.33** | 0.75 | 0.50 | 0.25 | 0.59 | 0.67 | 1.27 | -0.60 | -3.66*** |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively T-values and p-values are reported based on the Satterthwaite method where the Folded F equality of variances test indicates a significance of <0.05 and the Pooled method otherwise.

*Figure 5: CSR performance-based incentive use across industry (reproduced from Keddie, 2019)*

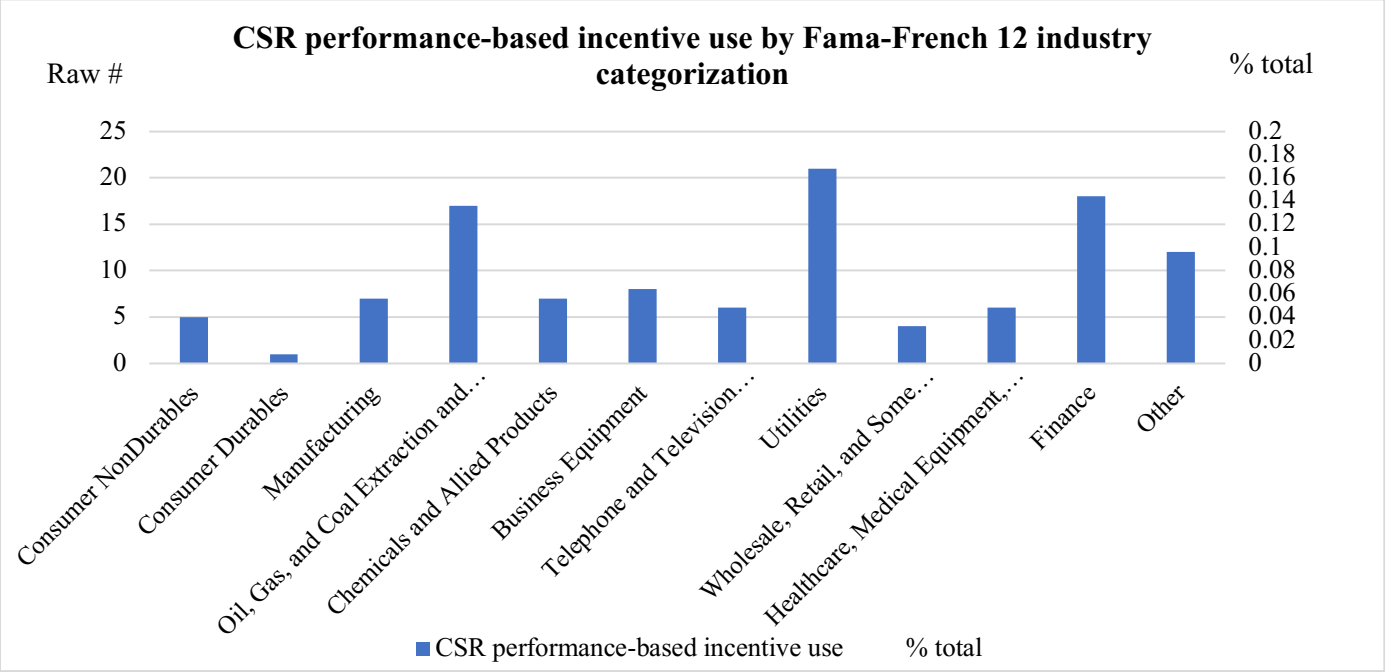


*Table 26: Pearson Correlation Table*

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **CSR_INC** | 1.00 | | | | | | | | | | | |
| **2** | **CSR_HARDR** | 0.61*** | 1.00 | | | | | | | | | | |
| **3** | **CSR_HARDG** | 0.77*** | 0.79*** | 1.00 | | | | | | | | | |
| **4** | **CSR_SOFTR** | 0.66*** | -0.20*** | 0.20*** | 1.00 | | | | | | | | |
| **5** | **SOC_HARDR** | 0.42*** | 0.69*** | 0.55*** | -0.14*** | 1.00 | | | | | | | |
| **6** | **SOC_HARDG** | 0.55*** | 0.50*** | 0.72*** | 0.21*** | 0.77*** | 1.00 | | | | | | |
| **7** | **SOC_SOFTR** | 0.52*** | -0.15*** | 0.18*** | 0.78*** | -0.11** | 0.32*** | 1.00 | | | | | |
| **8** | **SOC_SOFTG** | 0.38*** | -0.11*** | -0.14*** | 0.58*** | -0.08* | -0.10** | 0.74*** | 1.00 | | | | |
| **9** | **ENV_HARDG** | 0.11*** | 0.04 | 0.15*** | 0.10** | -0.02 | -0.03 | -0.03 | -0.02 | 1.00 | | | |
| **10** | **ENV_SOFTR** | 0.15*** | -0.04 | 0.04 | 0.22*** | -0.03 | -0.04 | -0.04 | -0.03 | 0.51*** | 1.00 | | |
| **11** | **SOCENV_HARDR** | 0.40*** | 0.65*** | 0.52*** | -0.13*** | -0.08* | -0.11** | -0.10** | -0.07* | -0.02 | -0.03 | 1.00 | |
| **12** | **SOCENV_HARDG** | 0.44*** | 0.57*** | 0.58*** | 0.01 | -0.09** | -0.12*** | -0.11*** | -0.08* | -0.02 | -0.03 | 0.89*** | 1.00 |
| **13** | **SOCENV_SOFTR** | 0.33*** | -0.10** | 0.06 | 0.50*** | -0.07 | -0.09** | -0.08* | -0.06 | -0.02 | -0.02 | -0.06 | 0.20*** |
| **14** | **OVERLAPIN** | 0.26*** | 0.25*** | 0.27*** | 0.08* | 0.15*** | 0.16*** | 0.03 | -0.02 | -0.03 | 0.03 | 0.19*** | 0.22*** |
| **15** | **OVERLAPOUT** | 0.11*** | 0.12*** | 0.14*** | 0.03 | 0.01 | 0.03 | -0.02 | -0.06 | -0.02 | -0.02 | 0.16*** | 0.17*** |
| **16** | **LT_OWN** | 0.02 | -0.02 | -0.02 | 0.04 | -0.02 | 0.00 | 0.03 | 0.02 | 0.17*** | 0.13*** | -0.04 | -0.07* |
| **17** | **ST_OWN** | -0.09** | -0.04 | -0.07 | -0.08* | -0.04 | -0.06 | -0.06 | -0.04 | -0.05 | -0.02 | -0.00 | -0.02 |
| **18** | **FF_PEER_PRESSURE** | 0.24*** | 0.27*** | 0.26*** | 0.04 | 0.16*** | 0.13*** | -0.01 | -0.01 | 0.08* | 0.05 | 0.19*** | 0.20*** |
| **19** | **CSR_COMM** | 0.23*** | 0.20*** | 0.23*** | 0.09** | 0.10** | 0.11*** | 0.03 | -0.00 | 0.04 | 0.07 | 0.18*** | 0.20*** |
| **20** | **ESI** | 0.38*** | 0.42*** | 0.40*** | 0.07 | 0.19*** | 0.18*** | -0.00 | -0.04 | 0.01 | -0.01 | 0.37*** | 0.37*** |
| **21** | **LN_REV** | 0.22*** | 0.12*** | 0.16*** | 0.16*** | 0.06 | 0.11*** | 0.16*** | 0.12*** | -0.06 | 0.00 | 0.11** | 0.12*** |
| **22** | **ENV_SCORE_2014** | 0.25*** | 0.08 | 0.17*** | 0.22*** | 0.02 | 0.09* | 0.14*** | 0.09* | 0.04 | 0.06 | 0.09* | 0.13** |
| **23** | **SOC_SCORE_2014** | 0.30*** | 0.18*** | 0.25*** | 0.19*** | 0.05 | 0.11** | 0.09* | 0.03 | 0.12*** | 0.08* | 0.19*** | 0.21*** |
| **24** | **ESI_EXP** | 0.22*** | 0.30*** | 0.28*** | -0.01 | 0.16*** | 0.17*** | -0.00 | -0.05 | -0.06 | -0.01 | 0.25*** | 0.23*** |

*Continued on next page…*

*Table 26: Pearson Correlation Table Continued…*

| | | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **13** | **SOCENV_SOFTR** | 1.00 | | | | | | | | | | | |
| **14** | **OVERLAPIN** | 0.09 * | 1.00 | | | | | | | | | | |
| **15** | **OVERLAPOUT** | 0.08 * | 0.52 *** | 1.00 | | | | | | | | | |
| **16** | **LT_OWN** | -0.03 | -0.02 | 0.01 | 1.00 | | | | | | | | |
| **17** | **ST_OWN** | -0.04 | -0.08 * | -0.03 | -0.23*** | 1.00 | | | | | | | |
| **18** | **FF_PEER_PRESSURE** | 0.06 | 0.03 | 0.01 | 0.18 *** | -0.07 | 1.00 | | | | | | |
| **19** | **CSR_COMM** | 0.08 * | 0.84 *** | 0.51 *** | -0.02 | -0.03 | 0.06 | 1.00 | | | | | |
| **20** | **ESI** | 0.13 *** | 0.24 *** | 0.12 *** | -0.05 | -0.03 | 0.25 *** | 0.26 *** | 1.00 | | | | |
| **21** | **LN_REV** | 0.05 | 0.16 *** | 0.07 | -0.13*** | -0.15*** | -0.10 ** | 0.14 *** | 0.04 | 1.00 | | | |
| **22** | **ENV_SCORE_2014** | 0.14 *** | 0.20 *** | 0.25 *** | -0.04 | -0.17*** | -0.07 | 0.22 *** | 0.19 *** | 0.33 *** | 1.00 | | |
| **23** | **SOC_SCORE_2014** | 0.16 *** | 0.20 *** | 0.14 *** | -0.01 | -0.13*** | -0.02 | 0.23 *** | 0.26 *** | 0.29 *** | 0.70 *** | 1.00 | |
| **24** | **ESI_EXP** | -0.00 | 0.18*** | 0.09* | -0.07 | -0.01 | 0.27*** | 0.18*** | 0.33*** | 0.03 | 0.02 | 0.12** | 1.00 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively.

The dependent variables are *CSR_INC* is a dummy variable where 1 indicates the presence of CSR performance-based incentives and 0 indicates the absence of such variables; *CSR_HARDR (CSR_SOFTR)* is a dummy variable where 1 indicates firms are using a hard (soft) metric for the CSR performance-based incentive with a restrictive definition of hard; *CSR_HARDG* is a dummy variable where 1 indicates firms are using a hard metric for the CSR performance-based incentive with a more broad definition of hard; *SOC_HARDR* (*SOC_SOFTR*) is a dummy variable where 1 indicates firms are using a hard (soft) metric and are using only social performance-based incentives with a restrictive definition of hard; *SOC_HARDG* (*SOC_SOFTG*) is a dummy variable where 1 indicates firms are using a hard (soft) metric and are using only social performance-based incentives with a more broad definition of hard; *ENV_HARDG* is a dummy variable where 1 indicates firms are using a hard metric and are using only environmental performance-based incentives with a more broad definition of hard; *ENV_SOFTR* is a dummy variable where 1 indicates firms are using a soft metric and are using only environmental performance-based incentives with a restrictive definition of a hard metric; *SOCENV_HARDR* (*SOCENV _SOFTR*) is a dummy variable where 1 indicates firms are using a hard (soft) metric and are using both social and environmental performance-based incentives with a restrictive definition of hard; *SOCENV _HARDG* is a dummy variable where 1 indicates firms are using a hard metric and are using both social and environmental performance-based incentives with a more broad definition of hard. The remaining variables are as follows: *OVERLAPIN* is a dummy variable where 1 indicates that at least one director on the board sits on both the CSR Committee AND the Compensation Committee within the same firm; *OVERLAPOUT* is a dummy variable where 1 indicates that at least one director on the board sits on the Compensation Committee at the firm of interest AND sits on a CSR Committee at another firm; *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score for the year 2014; *SOC_SCORE_2014* is the social disclosure score for the year 2014; *ESI_EXP* is calculated as an experience score for the CSR committee at the firm of interest based on the max. ESI experience of its directors.

*Table 27: Binary Logistic Regression Results*

| | | ***CSR_INC*** | ***CSR_HARDR*** | ***CSR_HARDG*** | ***CSR_SOFTR*** |
|---|---|---|---|---|---|
| **Parameter** | **Pred. sign** | Model 1 Estimate (Wald Chi-Square) | Model 2 Estimate (Wald Chi-Square) | Model 3 Estimate (Wald Chi-Square) | Model 4 Estimate (Wald Chi-Square) |
| **Intercept** | | -6.34*** (20.35) | -6.67*** (12.77) | -5.61*** (13.07) | -4.78*** (10.36) |
| **OVERLAPIN** | + | 1.45** (4.40) | 2.12*** (5.24) | 1.77*** (5.49) | -0.04 (0.00) |
| **OVERLAPOUT** | + | -0.39 (0.28) | 0.23 (0.08) | 0.33 (0.19) | -0.50 (0.46) |
| **LT_OWN** | | 0.05 (0.21) | -0.00 (0.00) | -0.03 (0.05) | 0.08 (0.35) |
| **ST_OWN** | | 0.02 (0.60) | 0.01 (0.16) | 0.00 (0.01) | 0.01 (0.11) |
| **FF_Peer_Pressure** | | 10.54*** (13.21) | 9.63*** (7.91) | 10.28*** (11.35) | 3.79 (1.48) |
| **CSR_COMM** | | -0.39 (0.46) | -1.10 (1.72) | -0.75 (1.31) | 0.40 (0.46) |
| **ESI** | | 1.36*** (21.74) | 2.13*** (34.70) | 1.68*** (30.61) | -0.25 (0.55) |
| **LN_REV** | | 0.35*** (8.11) | 0.31* (3.62) | 0.26* (3.64) | 0.21 (2.52) |
| **ENV_SCORE_2014** | | 0.02* (2.65) | -0.02 (1.19) | -0.00 (0.00) | 0.03*** (7.32) |
| **SOC_SCORE_2014** | | 0.01 (0.51) | 0.02 (1.10) | 0.02 (1.37) | -0.00 (0.05) |
| Max-rescaled R-square | | 0.31 | 0.35 | 0.32 | 0.10 |
| Likelihood Ratio | | 88.86*** | 82.61*** | 87.58*** | 22.46*** |
| N | | 346 | 346 | 346 | 346 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variables are *CSR_INC* is a dummy variable where 1 indicates the presence of CSR performance-based incentives and 0 indicates the absence of such variables; *CSR_HARDR* (*CSR_SOFTR* ) is a dummy variable where 1 indicates firms are using a hard (soft) metric for the CSR performance-based incentive with a restrictive definition of hard; *CSR_HARDG* is a dummy variable where 1 indicates firms are using a hard metric for the CSR performance-based incentive with a more broad definition of hard. The independent variables are as follows: *OVERLAPIN* is a dummy variable where 1 indicates that at least one director on the board sits on both the CSR Committee AND the Compensation Committee within the same firm; *OVERLAPOUT* is a dummy variable where 1 indicates that at least one director on the board sits on the Compensation Committee at the firm of interest AND sits on a CSR Committee at another firm. The control variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score for the year 2014; *SOC_SCORE_2014* is the social disclosure score for the year 2014.

*Table 28: Association of Predicted Probabilities and Observed Responses*

| | ***CSR_INC*** | ***CSR_HARDR*** | ***CSR_HARDG*** | ***CSR_SOFTR*** |
|---|---|---|---|---|
| **Percent Concordant**[7] | 77.5 | 81.4 | 77.8 | 67.7 |
| **Percent Discordant** | 22.5 | 18.6 | 22.2 | 32.3 |
| **Percent Tied** | 0.0 | 0.0 | 0.0 | 0.0 |
| **Pairs** | 28408 | 17608 | 23688 | 19728 |
| **Somers' D** | 0.551 | 0.628 | 0.556 | 0.353 |
| **Gamma** | 0.551 | 0.628 | 0.556 | 0.353 |
| **Tau-a** | 0.262 | 0.185 | 0.221 | 0.117 |
| **c** | 0.775 | 0.814 | 0.778 | 0.677 |

[7] The percent concordant is a measure of model fitness; the higher the concordance ratio, the better the model.

*Table 29: Binary Logistic Regression Results*

| | | ***SOC_HARDR*** | ***SOC_HARDG*** | ***SOC_SOFTR*** | ***SOC_SOFTG*** |
|---|---|---|---|---|---|
| **Parameter** | **Pred. sign** | Model 1 Estimate (Wald Chi-Square) | Model 2 Estimate (Wald Chi-Square) | Model 3 Estimate (Wald Chi-Square) | Model 4 Estimate (Wald Chi-Square) |
| **Intercept** | | -4.08** (3.86) | -3.78** (5.31) | -5.35*** (9.82) | -6.77*** (8.82) |
| **OVERLAPIN** | + | 13.30 (0.00) | 2.33** (4.40) | 0.19 (0.06) | -0.25 (0.06) |
| **OVERLAPOUT** | + | -0.54 (0.34) | -0.39 (0.27) | -0.97 (1.14) | -13.82 (0.00) |
| **LT_OWN** | | -0.07 (0.13) | -0.02 (0.03) | 0.07 (0.24) | 0.07 (0.13) |
| **ST_OWN** | | -0.00 (0.01) | -0.00 (0.01) | 0.02 (0.43) | 0.03 (0.67) |
| **FF_Peer_Pressure** | | 7.88* (3.50) | 5.28 (2.52) | 1.56 (0.18) | 3.16 (0.40) |
| **CSR_COMM** | | -12.10 (0.00) | -1.27 (1.44) | 0.35 (0.25) | 0.72 (0.72) |
| **ESI** | | 1.14*** (7.00) | 0.82** (5.71) | -0.41 (1.05) | -1.00* (2.65) |
| **LN_REV** | | 0.10 (0.26) | 0.13 (0.78) | 0.28* (3.62) | 0.36* (3.40) |
| **ENV_SCORE_2014** | | 0.00 (0.00) | 0.01 (0.65) | 0.03*** (6.00) | 0.04** (4.65) |
| **SOC_SCORE_2014** | | -0.01 (0.17) | -0.01 (0.27) | -0.02 (1.51) | -0.03 (1.94) |
| Max-rescaled R-square | | 0.17 | 0.12 | 0.08 | 0.12 |
| Likelihood Ratio | | 28.10*** | 25.62*** | 15.99* | 17.51* |
| N | | 346 | 346 | 346 | 346 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variables are *SOC_HARDR* (*SOC_SOFTR)* is a dummy variable where 1 indicates firms are using a hard (soft) metric and are using only social performance-based incentives with a restrictive definition of hard; *SOC_HARDG* (*SOC_SOFTG)* is a dummy variable where 1 indicates firms are using a hard (soft) metric and are using only social performance-based incentives with a more broad definition of hard. The independent variables are as follows: *OVERLAPIN* is a dummy variable where 1 indicates that at least one director on the board sits on both the CSR Committee AND the Compensation Committee within the same firm; *OVERLAPOUT* is a dummy variable where 1 indicates that at least one director on the board sits on the Compensation Committee at the firm of interest AND sits on a CSR Committee at another firm. The control variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score for the year 2014; *SOC_SCORE_2014* is the social disclosure score for the year 2014.

*Table 30: Association of Predicted Probabilities and Observed Responses*

| | ***SOC_HARDR*** | ***SOC_HARDG*** | ***SOC_SOFTR*** | ***SOC_SOFTG*** |
|---|---|---|---|---|
| **Percent Concordant** | 70.9 | 69.2 | 65.9 | 71.6 |
| **Percent Discordant** | 29.1 | 30.8 | 34.1 | 28.4 |
| **Percent Tied** | 0.0 | 0.0 | 0.0 | 0.0 |
| **Pairs** | 10329 | 16240 | 14304 | 8025 |
| **Somers' D** | 0.419 | 0.385 | 0.317 | 0.432 |
| **Gamma** | 0.419 | 0.385 | 0.317 | 0.432 |
| **Tau-a** | 0.072 | 0.105 | 0.076 | 0.058 |
| **c** | 0.709 | 0.692 | 0.659 | 0.716 |

*Table 31: Binary Logistic Regression Results*

| | | ***ENV_HARDG*** | ***ENV_SOFTR*** | ***SOCENV_HARDR*** | ***SOCENV_HARDG*** |
|---|---|---|---|---|---|
| **Parameter** | **Pred. sign** | Model 1 Estimate (Wald Chi-Square) | Model 2 Estimate (Wald Chi-Square) | Model 3 Estimate (Wald Chi-Square) | Model 4 Estimate (Wald Chi-Square) |
| **Intercept** | | -2.95 (0.05) | -11.05* (3.05) | -9.76*** (13.26) | -7.96*** (1.28) |
| **OVERLAPIN** | + | -11.27 (0.00) | 0.16 (0.01) | 0.19 (0.04) | 0.44 (0.21) |
| **OVERLAPOUT** | + | -4.77 (0.00) | -12.34 (0.00) | 1.18 (1.40) | 1.38* (2.30) |
| **LT_OWN** | | 0.81 (1.74) | 0.69** (4.36) | -0.17 (0.30) | -0.57* (3.67) |
| **ST_OWN** | | -0.28 (0.63) | 0.05 (0.20) | 0.04 (0.69) | 0.02 (0.13) |
| **FF_Peer_Pressure** | | 6.42 (0.05) | 8.64 (0.43) | 5.79 (1.67) | 8.81** (4.29) |
| **CSR_COMM** | | 3.90 (2.47) | 1.98 (2.18) | 0.01 (0.00) | -0.28 (0.11) |
| **ESI** | | -1.14 (0.17) | -1.50 (1.01) | 2.86*** (21.83) | 2.44*** (22.94) |
| **LN_REV** | | -1.30 (1.07) | 0.04 (0.01) | 0.52** (5.21) | 0.49** (5.50) |
| **ENV_SCORE_2014** | | -0.05 (0.59) | 0.03 (0.71) | -0.02 (1.62) | -0.01 (0.55) |
| **SOC_SCORE_2014** | | 0.17** (3.80) | 0.03 (0.63) | 0.03* (2.70) | 0.03 (2.17) |
| Max-rescaled R-square | | 0.59 | 0.24 | 0.35 | 0.36 |
| Likelihood Ratio | | 20.05** | 11.73* | 56.02*** | 65.97** |
| N | | 346 | 346 | 346 | 346 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variables are *ENV_HARDG* is a dummy variable where 1 indicates firms are using a hard metric and are using only environmental performance-based incentives with a more broad definition of hard; *ENV_SOFTR* is a dummy variable where 1 indicates firms are using a soft metric and are using only environmental performance-based incentives with a restrictive definition of a hard metric; *SOCENV_HARDR* is a dummy variable where 1 indicates firms are using a hard metric and are using both social and environmental performance-based incentives with a restrictive definition of a hard metric; *SOCENV_HARDG* is a dummy variable where 1 indicates firms are using a hard metric and are using both social and environmental performance-based incentives at the same time with a more broad definition of hard. The independent variables are as follows: *OVERLAPIN* is a dummy variable where 1 indicates that at least one director on the board sits on both the CSR Committee AND the Compensation Committee within the same firm; *OVERLAPOUT* is a dummy variable where 1 indicates that at least one director on the board sits on the Compensation Committee at the firm of interest AND sits on a CSR Committee at another firm. The control variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge

funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score for the year 2014; *SOC_SCORE_2014* is the social disclosure score for the year 2014.

*Table 32: Association of Predicted Probabilities and Observed Responses*

| | ***ENV_HARDG*** | ***ENV_SOFTR*** | ***SOCENV_HARDR*** | ***SOCENV_HARDG*** |
|---|---|---|---|---|
| **Percent Concordant** | 99.0 | 84.5 | 88.9 | 87.0 |
| **Percent Discordant** | 1.0 | 15.5 | 11.1 | 13.0 |
| **Percent Tied** | 0.0 | 0.0 | 0.0 | 0.0 |
| **Pairs** | 1029 | 1705 | 8904 | 10885 |
| **Somers' D** | 0.98 | 0.69 | 0.78 | 0.74 |
| **Gamma** | 0.98 | 0.69 | 0.78 | 0.74 |
| **Tau-a** | 0.02 | 0.02 | 0.12 | 0.14 |
| **c** | 0.99 | 0.85 | 0.89 | 0.87 |

*Table 33: Binary Logistic Regression Results*

| | | ***CSR_INC*** | ***CSR_HARDR*** | ***CSR_HARDG*** | ***CSR_SOFTR*** |
|---|---|---|---|---|---|
| **Parameter** | **Pred. sign** | Model 1 Estimate (Wald Chi-Square) | Model 2 Estimate (Wald Chi-Square) | Model 3 Estimate (Wald Chi-Square) | Model 4 Estimate (Wald Chi-Square) |
| **Intercept** | | -6.73*** (21.05) | -6.89*** (12.59) | -6.58*** (15.78) | -5.22*** (11.25) |
| **ESI_EXP** | + | 0.16 (1.25) | 0.29** (3.03) | 0.27** (3.25) | -0.05 (0.09) |
| **OVERLAPIN** | + | 1.31** (3.50) | 2.14*** (5.11) | 1.71*** (4.79) | -0.22 (0.10) |
| **OVERLAPOUT** | + | -0.28 (0.14) | 0.13 (0.03) | 0.34 (0.20) | -0.25 (0.11) |
| **LT_OWN** | | 0.09 (0.53) | 0.04 (0.06) | 0.02 (0.01) | 0.09 (0.49) |
| **ST_OWN** | | 0.03 (1.49) | 0.02 (0.38) | 0.02 (0.24) | 0.02 (0.44) |
| **FF_Peer_Pressure** | | 10.21*** (10.39) | 8.52** (5.19) | 10.10*** (8.90) | 4.08 (1.40) |
| **CSR_COMM** | | -0.42 (0.56) | -1.13 (1.78) | -0.78 (1.34) | 0.37 (0.39) |
| **ESI** | | 1.27*** (16.50) | 2.01*** (28.38) | 1.53*** (21.86) | -0.28 (0.58) |
| **LN_REV** | | 0.36*** (7.65) | 0.31* (3.24) | 0.30** (4.40) | 0.23* (2.76) |
| **ENV_SCORE_2014** | | 0.02 (2.54) | -0.01 (0.42) | 0.00 (0.01) | 0.03** (5.22) |
| **SOC_SCORE_2014** | | 0.01 (0.92) | 0.01 (0.43) | 0.02 (1.91) | 0.00 (0.10) |
| Max-rescaled R-square | | 0.32 | 0.37 | 0.36 | 0.10 |
| Likelihood Ratio | | 87.33*** | 84.73** | 92.56** | 21.75** |
| N | | 327 | 327 | 327 | 327 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variables are *CSR_INC* is a dummy variable where 1 indicates the presence of CSR performance-based incentives and 0 indicates the absence of such variables; *CSR_HARDR* (*CSR_SOFTR* ) is a dummy variable where 1 indicates firms are using a hard (soft) metric for the CSR performance-based incentive with a restrictive definition of hard; *CSR_HARDG* is a dummy variable where 1 indicates firms are using a hard metric for the CSR performance-based incentive with a more broad definition of hard. The independent variables are as follows: *ESI_EXP* is calculated as an experience score for the CSR committee at the firm of interest based on the max. ESI experience of its directors; *OVERLAPIN* is a dummy variable where 1 indicates that at least one director on the board sits on both the CSR Committee AND the Compensation Committee within the same firm; *OVERLAPOUT* is a dummy variable where 1 indicates that at least one director on the board sits on the Compensation Committee at the firm of interest AND sits on a CSR Committee at another firm. The control variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds

divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score for the year 2014; *SOC_SCORE_2014* is the social disclosure score for the year 2014.

*Table 34: Association of Predicted Probabilities and Observed Responses*

| | ***CSR_INC*** | ***CSR_HARDR*** | ***CSR_HARDG*** | ***CSR_SOFTR*** |
|---|---|---|---|---|
| **Percent Concordant** | 78.4 | 82.3 | 79.8 | 68.3 |
| **Percent Discordant** | 21.6 | 17.7 | 20.2 | 31.7 |
| **Percent Tied** | 0.0 | 0.0 | 0.0 | 0.00 |
| **Pairs** | 25172 | 15812 | 20880 | 17030 |
| **Somers' D** | 0.57 | 0.65 | 0.60 | 0.37 |
| **Gamma** | 0.57 | 0.65 | 0.60 | 0.37 |
| **Tau-a** | 0.27 | 0.19 | 0.23 | 0.12 |
| **c** | 0.78 | 0.82 | 0.80 | 0.68 |

*Table 35: Binary Logistic Regression Results*

| | | ***SOC_HARDR*** | ***SOC_HARDG*** | ***SOCENV_HARDR*** | ***SOCENV_HARDG*** | ***SOCENV_SOFTR*** |
|---|---|---|---|---|---|---|
| **Parameter** | **Pred. sign** | Model 1 Estimate (Wald Chi-Square) | Model 2 Estimate (Wald Chi-Square) | Model 3 Estimate (Wald Chi-Square) | Model 4 Estimate (Wald Chi-Square) | Model 5 Estimate (Wald Chi-Square) |
| **Intercept** | | -4.78** (4.83) | -5.27*** (8.75) | -9.64*** (11.48) | -7.41*** (9.40) | -2.75 (1.13) |
| **ESI_EXP** | + | 0.27* (2.00) | 0.32*** (4.28) | 0.31* (1.75) | 0.14 (0.40) | -0.54* (2.24) |
| **OVERLAPIN** | + | 13.24 (0.00) | 2.14** (3.69) | 0.05 (0.00) | 0.42 (0.18) | 0.06 (0.00) |
| **OVERLAPOUT** | + | -0.60 (0.41) | -0.33 (0.19) | 1.18 (1.34) | 1.38* (2.17) | 1.29 (0.97) |
| **LT_OWN** | | -0.04 (0.04) | 0.03 (0.04) | -0.08 (0.06) | -0.53* (3.00) | -0.45 (2.07) |
| **ST_OWN** | | -0.00 (0.00) | 0.01 (0.05) | 0.06 (1.18) | 0.03 (0.26) | -0.05 (0.57) |
| **FF_Peer_Pressure** | | 5.13 (1.26) | 3.34 (0.81) | 5.93 (1.45) | 10.10** (4.72) | 9.20 (2.50) |
| **CSR_COMM** | | -12.00 (0.00) | -1.15 (1.17) | -0.13 (0.02) | -0.43 (0.25) | -0.72 (0.38) |
| **ESI** | | 0.90** (3.85) | 0.49 (1.69) | 2.92*** (18.83) | 2.43*** (20.83) | 0.74 (1.63) |
| **LN_REV** | | 0.18 (0.89) | 0.24 (2.45) | 0.42* (3.00) | 0.38* (3.15) | -0.05 (0.05) |
| **ENV_SCORE_2014** | | -0.00 (0.00) | 0.01 (0.32) | -0.01 (0.30) | -0.00 (0.01) | 0.02 (0.52) |
| **SOC_SCORE_2014** | | -0.01 (0.28) | -0.00 (0.01) | 0.02 (1.30) | 0.02 (1.02) | 0.02 (1.22) |
| Max-rescaled R-square | | 0.17 | 0.14 | 0.39 | 0.39 | 0.14 |
| Likelihood Ratio | | 27.36*** | 27.34*** | 60.22*** | 68.00*** | 17.20* |
| N | | 327 | 327 | 327 | 327 | 327 |

***, **, * denote statistical significance at the 1 percent, 5 percent and 10 percent levels respectively; p-values are based on one-tailed tests where the prediction is directional, and two-tailed tests otherwise.

The dependent variables are *SOC_HARDR* is a dummy variable where 1 indicates firms are using a hard metric and are using only social performance-based incentives with a restrictive definition of hard; *SOC_HARDG* is a dummy variable where 1 indicates firms are using a hard metric and are using only social performance-based incentives with a more broad definition of hard; *SOCENV_HARDR* (*SOCENV_SOFTR)* is a dummy variable where 1 indicates firms are using a hard (soft) metric and are using both social and environmental performance-based incentives with a restrictive definition of a hard metric; *SOCENV_HARDG* is a dummy variable where 1 indicates firms are using a hard metric and are using both social and environmental performance-based incentives at the same time with a more broad definition of hard. The independent variables are as follows: *ESI_EXP* is calculated as an experience score for the CSR committee at the firm of interest based on the max. ESI experience of its directors; *OVERLAPIN* is a dummy variable where 1 indicates that at least one director on the board sits on both the CSR Committee AND the

Compensation Committee within the same firm; *OVERLAPOUT* is a dummy variable where 1 indicates that at least one director on the board sits on the Compensation Committee at the firm of interest AND sits on a CSR Committee at another firm. The control variables are as follows: *LT_OWN* is calculated as the number of shares owned by pension funds divided by the total number of shares outstanding; *ST_OWN* is calculated as the number of shares owned by hedge funds divided by the total number of shares outstanding; *FF_Peer_Pressure* is calculated by determining the number of firms using CSR performance-based incentives within each industry code and divided this by the total number of firms within that industry, subtracting the subject firm if it already uses these incentives; *CSR_COMM* is a dummy variable where 1 indicates the presence of a CSR or Sustainability committee on the Board of Directors and 0 does not; *ESI* is a dummy variable where 1 indicates that the firm is in an environmentally sensitive industry 0 does not; *LN_REV* is the natural logarithm of firm revenue; *ENV_SCORE_2014* is the environmental disclosure score for the year 2014; *SOC_SCORE_2014* is the social disclosure score for the year 2014.

*Table 36: Association of Predicted Probabilities and Observed Responses*

| | ***SOC_HARDR*** | ***SOC_HARDG*** | ***SOCENV_ HARDR*** | ***SOCENV_ HARDG*** | ***SOCENV_ SOFTR*** |
|---|---|---|---|---|---|
| **Percent Concordant** | 72.9 | 72.1 | 89.5 | 88.0 | 77.6 |
| **Percent Discordant** | 27.1 | 27.9 | 10.5 | 12.0 | 22.4 |
| **Percent Tied** | 0.0 | 0.0 | 0.0 | 0.00 | 0.0 |
| **Pairs** | 9176 | 13850 | 8100 | 9962 | 5852 |
| **Somers' D** | 0.46 | 0.44 | 0.79 | 0.76 | 0.55 |
| **Gamma** | 0.46 | 0.44 | 0.79 | 0.76 | 0.55 |
| **Tau-a** | 0.08 | 0.12 | 0.12 | 0.14 | 0.06 |
| **c** | 0.73 | 0.72 | 0.90 | 0.88 | 0.78 |

**References**


Abdelmotaal, H., & Abdel-Kader, M. (2016). The use of sustainability incentives in executive remuneration contracts: Firm characteristics and impact on the shareholders' returns. *Journal of Applied Accounting Research*, *17*(3), 311-330.

Adams, R. B., Akyol, A. C., & Verwijmeren, P. (2018). Director skill sets. *Journal of Financial Economics*, *130*(3), 641–662.

Argote, L., & Fahrenkopf, E. (2016). Knowledge transfer in organizations: The roles of members, tasks, tools, and networks. *Organizational Behavior and Human Decision Processes*, *136*, 146–159.

Armstrong, C. S., Guay, W. R., & Weber, J. P. (2010). The role of information and financial reporting in corporate governance and debt contracting. *Journal of Accounting and Economics*, *50*(2), 179–234.

Bettis, J. C., J., Bizjak, J. M., Coles, J. L., & Kalpathy, S. L. (2015). Performance-Vesting Provisions in Executive Compensation. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2289566.

Brandes, P., Dharwadkar, R., & Suh, S. (2016). I know something you don't know!: The role of linking pin directors in monitoring and incentive alignment: Linking Pin Directors, Monitoring, and Incentive Alignment. *Strategic Management Journal*, *37*(5), 964–981.

Brunsson, N. (1989). *The Organization of Hypocrisy : Talk, decisions and actions in organizations*. http://www.diva-portal.org/smash/record.jsf?pid=diva2:358205.

Carcello, J. V., Hermanson, D. R., & Ye, Z. (2011). Corporate governance research in accounting and auditing: Insights, practice implications, and future research directions. *Auditing: A Journal of Practice & Theory*, *30*(3), 1–31.

Centre on Executive Compensation. (2017). Larry Fink's 2017 Letter to CEOs Focuses on Long-Term Growth, Buybacks, ESG. https://execcomp.org/News/NewsStories/larry-finks-2017-letter-to-ceos-focuses-on-long-term-growth-buybacks-esg.

Ceres. (2018). *Turning Point*. https://www.ceres.org/node/2275.

Cho, C. H., Laine, M., Roberts, R. W., & Rodrigue, M. (2015). Organized hypocrisy, organizational façades, and sustainability reporting. Accounting, Organizations and Society, 40, 78-94. doi:10.1016/j.aos.2014.12.003.

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society*, *33*(4), 303–327.

Cormier, D., & Magnan, M. (2014). The impact of social responsibility disclosure and governance on financial analysts' information environment. *Corporate Governance*. https://www.emerald.com/insight/content/doi/10.1108/CG-01-2013-0012/full/html

Cowden, B., Alhorr, H. S., & Bendickson, J. (2015). Experience-Based Green Board Capital: Linking Board of Directors and Firm Environmental Performance. *Journal of Leadership, Accountability & Ethics*, *12*(3). https://pdfs.semanticscholar.org/73e2/42d95caccc69a69e3b43764dc8bf854721e4.pdf

Cronqvist, H., & Fahlenbrach, R. (2013). CEO contract design: How do strong principals do it? *Journal of Financial Economics*, *108*(3), 659–674.

De Angelis, D., & Grinstein, Y. (2015). Performance Terms in CEO Compensation Contracts. *Review of Finance*, *19*(2), 619–651.

Dunbar, C. G., Li, Z. F., & Shi, Y. (2016). Corporate social responsibility and CEO risk-taking incentives. Working Paper.

Edmans, A., Gabaix, X., & Jenter, D. (2017). *Executive Compensation: A Survey of Theory and Evidence*. http://dx.doi.org/10.3386/w23596.

EY Center for Board Matters. (2019). *Board Matters Quarterly*. https://www.ey.com/publication/vwluassetsdld/bmq_07148-191us_april2019/$file/bmq_07148-191us_april2019.pdf?OpenElement.

Faleye, O., Hoitash, R., & Hoitash, U. (2018). Industry expertise on corporate boards. *Review of Quantitative Finance and Accounting*, *50*(2), 441–479.

Fedaseyeu, V., Linck, J. S., & Wagner, H. F. (2018). Do qualifications matter? New evidence on board functions and director compensation. *Journal of Corporate Finance*, *48*, 816–839.

Financial Post. *Global warming could render the assets of many financial companies worthless, Mark Carney warns*. (2019, December 30). https://business.financialpost.com/news/fp-street/boes-carney-says-finance-must-act-faster-on-climate-change

Fink, L. Larry Fink's Annual Letter to CEOs: A Sense of Purpose. https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter. Retrieved March 16, 2018.

Fink, L. *Larry Fink's Letter to CEOs: Profit and Purpose*. (2019). BlackRock. https://www.blackrock.com/americas-offshore/2019-larry-fink-ceo-letter.

Fink, L. (2020, January). *Larry Fink's Letter to CEOs | BlackRock*. BlackRock. https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter. Retrieved March 6, 2020.

Flammer, C., Hong, B., & Minor, D. (2019). Corporate governance and the rise of integrating corporate social responsibility criteria in executive compensation: Effectiveness and implications for firm outcomes. *Strategic Management Journal*, *40*(7), 1097–1122.

Guay, W. R., Kepler, J. D., & Tsui, D. (2019). The role of executive cash bonuses in providing individual and team incentives. *Journal of Financial Economics*, *133*(2), 441–471.

Haque, F. (2017). The effects of board characteristics and sustainable compensation policy on carbon performance of UK firms. *The British Accounting Review*, *49*(3), 347–364.

Hong, B., Li, Z., & Minor, D. (2016). Corporate Governance and Executive Compensation for Corporate Social Responsibility. *Journal of Business Ethics: JBE*, *136*(1), 199–213.

IRRC & Sustainable Investments Institute. (2013). "*Integrated Financial and Sustainability Reporting in the United States".*

Kaplan, R., & Norton, D. (1992). The balanced scorecard - measures that drive performance. *Harvard Business Review*, (Jan/Feb), 71-79.

Keddie, L. (2019). Succumbing to the Pressure? An Investigation of the Influence of Stakeholder Power on CSR performance-based incentives use. Working Paper.

Kolev, K. D., Wangrow, D. B., Barker, V. L., III, & Schepker, D. J. (2019). Board Committees in Corporate Governance: A Cross-Disciplinary Review and Agenda for the Future. *Journal of Management Studies*, *23*, 69.

Kolk, A., & Perego, P. (2014). Sustainable bonuses: Sign of corporate responsibility or window dressing? *Journal of Business Ethics*, *119*(1), 1-15. doi:10.1007/s10551-012-1614-x.

Lawson, R. A., Blocher, E. J., Brewer, P. C., Cokins, G., Sorensen, J. E., Stout, D. E., Sundem, G. L., Wolcott, S. K., & Wouters, M. J. F. (2013). Focusing Accounting Curricula on Students' Long-Run Careers: Recommendations for an Integrated Competency-Based Framework for Accounting Education. *Issues in Accounting Education*, *29*(2), 295–317.

Li, Z., & Wang, L. (2016). Executive Compensation Incentives Contingent on Long-Term Accounting Performance. *The Review of Financial Studies*, *29*(6), 1586–1633.

Maas, K., & Rosendaal, S. (2016). Sustainability targets in executive remuneration: Targets, time frame, country and sector specification. *Business Strategy and the Environment*, 25(6), 390-401. doi:10.1002/bse.1880.

Maas, K. (2018). Do Corporate Social Performance Targets in Executive Compensation Contribute to Corporate Social Performance? *Journal of Business Ethics: JBE*, *148*(3), 573–585.

Minor, D. (2016). Executive compensation and environmental harm. Working Paper 16-076. Harvard Business School.

O'Connell, V., & O'Sullivan, D. (2014). The influence of lead indicator strength on the use of nonfinancial measures in performance management: Evidence from CEO compensation schemes. Strategic Management Journal, 35(6), 826-844.

Park, S. Y., & Chon, M. L. (2015). Do stock options influence CSR activity? Indian Journal of Science and Technology, 8(18).

Patten, D. M. (2019). Seeking legitimacy. *Sustainability Accounting, Management and Policy Journal*, *ahead-of-print*(ahead-of-print). https://doi.org/10.1108/SAMPJ-12-2018-0332.

Peters, G. F., & Romi, A. M. (2014). Does the Voluntary Adoption of Corporate Governance Mechanisms Improve Environmental Risk Disclosures? Evidence from Greenhouse Gas Emission Accounting. *Journal of Business Ethics: JBE*, *125*(4), 637–666.

Rodrigue, M., Magnan, M., & Boulianne, E. (2013). Stakeholders' influence on environmental strategy and performance indicators: A managerial perspective. *Management Accounting Research*, *24*(4), 301-316. doi:10.1016/j.mar.2013.06.004.

Rodrigue, M., Magnan, M., & Cho, C. H. (2013). Is environmental governance substantive or symbolic? An empirical investigation. *Journal of Business Ethics*, *114*(1), 107-129. doi:10.1007/s10551-012-1331-5.

Sassen, Stoffel, Behrmann, Ceschinski & Doan. (2018). Effects of committee overlap on the monitoring effectiveness of boards of directors: a meta-analysis. *Journal of Risk Finance*, *19*(4), 379–395.

The Canadian Coalition for Good Governance. (2018). *THE DIRECTORS' E&S GUIDEBOOK*.

Walls, J. L., & Hoffman, A. J. (2013). Exceptional boards: Environmental experience and positive deviance from institutional norms. *Journal of Organizational Behavior*, *34*(2), 253–271.

**Discussion and Conclusion**

This dissertation explores the use of CSR performance-based incentives through the lens of corporate governance. The first paper examines the research question: Who is influencing the use of CSR performance-based incentives? This work does so from two theoretical angles, the first, stakeholder power expects that various stakeholders are influencing the use of CSR performance-based incentives in the executive compensation contract; the second theory, efficient contracting, presumes that the contracts are efficient in their design and consequently will not be affected by any particular stakeholder group.

The second paper examines the following research question: Are top management teams influencing the use of CSR performance-based incentives as a way to obtain excess compensation? This paper uses organized hypocrisy and managerial hegemony to posit that top management teams may be obtaining excess compensation through the use of seemingly 'good' CSR performance-based incentives. Any excess compensation is obtained vis-à-vis top management teams' power over the board while the use of CSR performance-based incentives may be hypocritical, a way to 'look good' while obtaining extra benefits. Contrasting this perspective is again efficient contracting which suggests that no excess compensation should be found simply from the use of a particular form of incentive.

Finally, the third paper addresses the research question: Does knowledge transfer from the board of directors affect a firm's use of CSR performance-based incentives? Here, I use information asymmetry reduction as a possible means for how CSR performance-based incentives come to be in the executive compensation contract. Specifically, that a director's experience sitting on both the compensation committee and CSR committee or previous environmental experience may be associated with increased use of such incentives by way of knowledge transfer. Alternatively, it is possible that CSR committees and environmental experience add little value and are simply acts of show making the use of CSR performance-based incentives by directors with this experience more consistent with organized hypocrisy. The remainder of this section will outline the findings for each paper, the contributions of the work, implications of the research, limitations as well as future research possibilities.

## *1.1. Findings*

### *1.1.1. Succumbing To The Pressure? An Investigation Of The Influence Of Stakeholder Power On CSR Performance-Based Incentives Use*

The first paper of the dissertation explores who is influencing the use of CSR performance-based incentives. The paper poses three hypotheses to explore this influence:

H1: CSR performance-based incentives are more likely to be used in firms where long-term oriented institutional investors have power and monitor CSR;

H2: CSR performance-based incentives are less likely to be used in firms where short-term oriented institutional investors have power and monitor CSR; and,

H3: CSR performance-based incentives will be more likely where peer competitors are using them, due to imitation.

The hypotheses are studied through the lens of stakeholder power and efficient contracting. Under the stakeholder power approach, various stakeholders, here peers, short-term view institutional shareholders and long-term view institutional shareholders, exert influence on the executive compensation process. If this perspective is true, I expect to see positive associations from tests of the hypotheses for the peers and long-term view institutional shareholders and negative associations from the influence of short-term view institutional shareholders. Contrasting this perspective, the efficient contracting approach argues that boards create efficient contracts that reflect all stakeholders and I would expect to see no results from the tests of the hypotheses for any stakeholder should this perspective be true.

To test these hypotheses, I rely mainly on quantitative analyses with S&P 500 firms, but I also conduct qualitative interviews with key executives to add context to the findings. For the first hypothesis, no significant quantitative results are found. However, the qualitative interviews conducted with some top executives and directors do provide some anecdotal support for this hypothesis. Those firms with greater levels of short-term view institutional investors are significantly less likely to use CSR performance-based incentives supporting the second hypothesis. This is also supported by the qualitative interviews which suggest that shareholders are non-homogenous and have differing time horizons for their investments; a variety of stakeholders put pressure on firms to align time horizons and deal with CSR issues; and the incentives under study are perceived as an effective solution to these issues. Where short-term

view institutional shareholders have power, it is suggested they use this to influence the compensation contract away from CSR performance-based incentives. The quantitative analyses support the notion that firms are using such incentives due, in part, to peer pressure from their industry competitors in line with hypothesis H3. Firms are significantly more likely to use CSR performance-based incentives when their peers do. Qualitative interviews reveal that this may happen for a variety of reasons including significant monitoring of peer practices to deal with new issues/pressures that arise.

Overall, results from the first paper show quantitative support for two of the three hypotheses. Qualitative comments are consistent with all three hypotheses. I interpret these results as providing evidence of stakeholder power in the executive compensation design process in contrast to the efficient contracting theory, which would imply no results. Short-term view institutional shareholders push to align management's compensation plan with their own short-term view, pressing to exclude CSR performance-based incentives from the compensation plan. Long-term view institutional shareholders are adept at resisting this pressure where they have power. Finally, peer pressure from competitor firms seems to pressure companies to use CSR performance-based incentives as a possible means to deal with the uncertainty surrounding CSR issues.

### *1.1.2. Who Is More Powerful: The Board Or Management? Exploring The Relationship Between CSR Performance-Based Incentives And Executive Compensation*

The second paper in the dissertation explores the use of CSR performance-based incentives when the top management team has power to determine if any excess compensation is obtained. I view this through the lens of managerial hegemony/organized hypocrisy and efficient contracting. If the managerial hegemony/organized hypocrisy perspective is true, I should see excess compensation where management has power whereas I would expect no results if the efficient contracting perspective is true. The hypotheses put forth are as follows:

> H1: When top management teams hold the balance of power, the use of CSR performance-based incentives for management is associated with an increase in excess bonus pay;
>
> H2: The environmental sensitivity of a firm's industry moderates the relation between managerial power and the use of CSR performance-based incentives for the purpose of receiving excess compensation;

H3a: Use of a CSR committee at the board level moderates excess compensation when using CSR performance-based incentives; and

H3b: The presence of long-term view institutional shareholders moderates excess compensation when using CSR performance-based incentives.

Results are consistent with the idea that when senior management has power, they do receive excess compensation when using CSR performance-based incentives, which in line with the managerial hegemony/organized hypocrisy perspective. Not only are top management teams associated with excess compensation when they have power (managerial hegemony) but they are doing this with a tool that appears to serve stakeholder interests producing an inherent conflict (organized hypocrisy). This results in excess compensation of approximately $180,000 per top management team member or over $900,000 for the team as a whole. These results support the first hypothesis.

In the second hypothesis, I consider whether this effect is driven by presence in an environmentally sensitive industry (ESI). ESI's are known to engage in a variety of 'greenwashing' and hypocritical activities and thus it is of interest whether these incentives are the latest tool of choice. I find no support for the effect being driven by firms in the ESI, thus supporting the notion that these activities are more widespread. These results do not support the second hypothesis. Last, I consider whether long-term view institutional shareholders or CSR committees are able to mitigate this type of behaviour. While the interaction terms are not significant, these corporate governance mechanisms do appear to reduce the significance of the main effect. Formally, I conclude that this provides mixed support for H3a and H3b. Overall, while there is support for the idea that top management teams with power are using CSR performance-based incentives to obtain excess compensation, there is some evidence regarding the ability of two corporate governance mechanisms (CSR committees and long-term view institutional shareholders) to mitigate this effect.

### *1.1.3. The Board Of Directors And CSR Performance-Based Incentives: What's The 'Link'?*

The third and final paper in the dissertation investigates whether directors' knowledge transfers facilitate the use of CSR performance-based incentives. To understand this, I use an information asymmetry perspective that posits that there is knowledge transfer among directors to reduce information asymmetry, with such transfer having a positive effect on the use of CSR

performance-based incentives. This contrasts with the organized hypocrisy perspective which in this case would find the use of such incentives is not associated with directors' knowledge and simply used 'for show'. I make the following hypotheses in line with the theories proposed:

H1: Effective CSR performance-based incentives are more likely to be used in firms where directors sit on both the CSR Committee and the Compensation Committee within the same firm;

H2: Effective CSR performance-based incentives are more likely to be used in firms where directors sit on the Compensation Committee at the firm of interest and a CSR Committee elsewhere;

H3: Effective CSR performance-based incentives are more likely to be used where directors have experience in the ESI.

I expect that if the reduced information asymmetry perspective is true, I will see a positive association between 'linking pin' directors who sit on both the compensation and CSR committees and the use of effective CSR performance-based incentives. Further, if this perspective is true, then a director's experience in the ESI will also translate into increased use of such incentives. Alternatively, if the use of such incentives is simply an exercise in organized hypocrisy, then I would expect to see either no association with the use of effective CSR performance-based incentives or a positive association with the use of ineffective CSR performance-based incentives.

Results provide evidence supporting the information asymmetry reduction perspective for the transfer of knowledge vis-à-vis directors for the use of effective, hard CSR performance-based incentives. Specifically, when a director sits on both the CSR committee and the compensation committee, this is positively associated with the use of such incentives, in particular using only hard, social performance-based incentives in line with the first hypothesis. It is unclear exactly why this may be the case, but it is possible that when a director has committee overlap within the board, this experience leads to greater knowledge of the social needs of the firm; further research could explore this possibility. Moreover, directors sitting on the compensation committee at the firm of interest and who sit on a CSR committee elsewhere are associated with the use of hard social and environmental performance-based incentives consistent with the second hypothesis. It is possible that this 'external' experience may broaden the view of the director leading to a push for both categories of CSR performance-based incentives use. Future research may help to better understand the nature of this relationship. Finally, for those directors with experience in an ESI,

this is also associated with the use of hard social performance-based incentives as well as the hard combined social and environmental performance-based incentives. Notably, these directors are significantly and negatively associated with the use of soft social and environmental performance-based incentives. Overall, the results are consistent with the information asymmetry reduction approach that directors' knowledge is positively associated with the use of effective, hard CSR performance-based incentives and negatively associated with the use of ineffective, soft CSR performance-based incentives.

### *1.2. Contributions*

This dissertation contributes to research on executive compensation research, non-financial performance metrics, and on CSR corporate governance. Each paper in the dissertation contributes to the literature in a unique way by examining why firms use CSR performance-based incentives and by exploring the related corporate governance mechanisms at work. In particular, this research extends the work of Flammer, Hong & Minor (2019), Maas (2018), Grabner, Renders & Yang (2016), Hong, Li & Minor (2016) & Abdelmotaal & Abdel-Kader (2016) who all examine some of the determinants of the use of CSR performance-based incentives.

To the best of my knowledge, the initial paper in the dissertation is the first to examine stakeholders' influence on directors' decision to use CSR performance-based incentives in executive compensation contracts. By employing a novel theoretical extension of efficient contracting, this work suggests that stakeholder power influences boards' selection of performance metrics for executive compensation contracts, consequently moderating the executive compensation setting process. This research extends the work by Flammer, Hong & Minor (2019) who explore the use of CSR performance-based incentives as a way to align shareholders' preferences with that of management. I do this by considering the influence of how non-homogenous shareholders and peer stakeholders influence the compensation setting process with regard to these incentives. I also extend the corporate governance literature into the determination of an emerging set of CSR-based metrics in executive incentive plans, particularly in the bonus plan (Guay et al., 2017).

The second paper is a first step towards addressing Kolk & Perego's (2014) concern that the use of CSR performance-based incentives may be a form of window dressing. To the best of

my knowledge, my study is the first to examine the use of CSR performance-based metrics in executive compensation contracts as a means for top management teams to attain extra compensation above and beyond that to which we would expect on a normalized model; this builds upon Maas' (2018) and Flammer, Hong & Minor's (2019) work by examining this previously unexplored explanation. Previous research has taken a mostly positive view of the use of CSR performance-based incentives while my work here takes a more critical perspective. Moreover, my research explores how membership in an environmentally sensitive industry (ESI), the presence of a CSR committee or long-term view institutional shareholders may lessen this compensation effect. Additionally, this research enhances our knowledge of annual incentive plans as well as some of the behavioural implications in executive compensation, both areas where there is a scarcity of knowledge currently (Edmans and Gabaix, 2016). My work extends the executive compensation literature by including a theory not previously applied to the executive compensation literature: organized hypocrisy (Brunsson, 1989; e.g. Cho, Laine, Roberts and Rodrigue, 2015).

To the best of my knowledge, the third paper in the dissertation is the first to explore: 1) knowledge transfer as a determinant of the use of CSR performance-based incentives; 2) the effects of 'linking pin' directors between the CSR committee overlapping with the compensation committee as a possible determinant of CSR performance-based incentive use; and 3) the relationship between this knowledge transfer and the sub-components of such incentives. In addition to the executive compensation and CSR literatures, this work also contributes to the literature on committee overlap, an area of growing interest. Further, this extends work from Peters and Romi (2014) and Brandes, Dharwadkar & Suh (2016) by examining the overlap of the Compensation and CSR Committees. This research further extends Maas (2018) by examining the breakdown of CSR performance-based incentives into sub-components of social and/or environmental metric sub-categories. Additionally, the paper fills a gap in prior research by connecting some of the determinants of CSR performance-based incentives to the use of these different sub-categories.

### *1.3. Implications*

Broadly, this dissertation helps us to understand who is influencing the use or avoidance of CSR performance-based incentives (peers and short-term view institutional shareholders), as well as when these incentives may be used well (when directors have experience and knowledge) and when they may be abused (when top management teams have power). Practically, the first paper provides evidence that could have policy implications for regulators looking to better regulate the use of CSR performance-based incentives, as well as for shareholders and other stakeholders looking for a better understanding of why such incentives are being used and who is influencing the process. Boards of directors should be aware that shareholders have differing time horizons and may pressure firms to use (or not use as the case may be) CSR performance-based incentives. Additionally, boards should be aware of peer use of CSR performance-based incentives, but caution is warranted if the firm is simply using these because their peers are. It is likely that the use of such incentives needs to be adapted to each firm's unique circumstances and more research is necessary to understand under what circumstances the use of CSR performance-based incentives are effective.

The second paper provides evidence that will help boards to better understand management's motivations for the inclusion of CSR performance-based incentives in the executive compensation contract. Firms should ensure that if and when such incentives are implemented that they are appropriate to the firm's circumstances and provide reasonable (as opposed to excess) compensation to management. Regulators and shareholders may be interested to seek better disclosure about the use of such incentives such as having the metrics and goals outlined in advance to mitigate any type of manipulation. Boards currently using these incentives would be warranted to review the use of CSR performance-based incentives to ensure that any compensation obtained from these is justified and that the plan is well designed to avoid or minimize manipulation. Additional oversight may be reasonable vis-à-vis corporate governance mechanisms like CSR committees though more work is necessary to understand its influence. Long-term view institutional shareholders and others concerned about the long-term sustainability of the firm would also serve the firm well by increasing the monitoring of the use of CSR performance-based incentives and pressing for additional disclosure where required as well as reforms if need be.

The third and final paper in the dissertation will be of interest to regulators, shareholders and boards of directors. Regulators and shareholders may wish to obtain additional disclosure about how CSR performance-based incentives have come to be used in the compensation plan and information about how they were selected. Further enquiry into the use of such incentives may help regulators, shareholders and boards to assess whether they are appropriate and/or effective for the firm. With knowledge transfer vis-à-vis committee overlap showing a positive relationship in the literature, boards should give this serious consideration when selecting members for each committee. By ensuring that there is director overlap between the compensation committee and the CSR committee, a board could promote the sharing of knowledge between the two committees with the goal of improving the use of CSR performance-based incentives. Firms without a CSR committee already may wish to create one to monitor CSR more closely; this is subject of course to filling this committee with appropriate directors and granting the committee sufficient oversight objectives to ensure it is effective.

### *1.4. Limitations*

One key limitation for this dissertation is that it does not consider the effectiveness of the use of CSR performance-based incentives on CSR performance. While I control for the firm's CSR performance both environmentally and socially, it is possible that these external ratings do not accurately reflect the firm's actual performance. This would be useful to further investigate in future research. Additionally, since this is an area of the literature that is still emerging, it is possible that some of the effects found in the results are actually from correlated omitted variables. Further research will help to refine the associated factors.

### *1.5. Future Research*

Given that the research on CSR performance-based incentives is still in its infancy, there are a plethora of questions yet to be investigated. It is critical to understand more about how CSR performance-based incentives affect the performance of the firm, in particular how various categories affect performance differently and whether the selection of particular metrics have greater or lesser effect. Further work could be done to clarify the role non-homogenous shareholders play in the use of such incentives, in particular given the qualitative support in the

first paper, understanding more about how long-term view institutional shareholders engage with firms on compensation. The materiality of these incentives is another interesting stream for future research. It would be useful to investigate whether firms are selecting measures and categories that are material to their operations and how this affects the performance of the firm.

It would be interesting to investigate whether executives manipulate particular forms of incentives, whether particular metrics are red flags in this regard and what the performance effects are when executives obtain excess compensation. Given that the dissertation finds what appears to be a gradient of hard to soft incentives, further work could clarify these categories and discriminate between any differing effects. A key indirect learning that emerges from the third paper is that we know little about what drives firms to use soft CSR performance-based incentives. Is this solely window-dressing? Do these incentives serve other purposes? What mechanisms drive the use of soft incentives? Understanding more about the processes that the compensation committee and the board goes through to develop and implement CSR performance-based incentives would be helpful. For example, why certain categories are chosen, how the metrics and targets are selected, as well as how and when the actual bonus is granted and under what circumstances is judgment applied to the granting of such bonuses. How are these incentives evolving over time? Are firms now incorporating the United Nations Sustainable Development Goals (UN SDGs)? And if so, are there any significant difference to the current plans under study? How are firms addressing the transition to a low-carbon economy and is this reflected in their compensation plans? Another interesting angle would be to examine whether these plans affect men and women differently in senior management.

**References**


Baker, D., Bivens, J., Scheider, J. (2019). *Reining in CEO compensation and curbing the rise of inequality*. Retrieved from Economic Policy Institute website: https://www.epi.org/files/pdf/168855.pdf.

BBC News. (2020, February 28). Greta Thunberg: What does the teenage climate change activist want? *BBC*. https://www.bbc.com/news/world-europe-49918719.

Centre on Executive Compensation. (2017). Larry Fink's 2017 Letter to CEOs Focuses on Long-Term Growth, Buybacks, ESG. https://execcomp.org/News/NewsStories/larry-finks-2017-letter-to-ceos-focuses-on-long-term-growth-buybacks-esg.

Elkington, John. (1997). "Cannibals with forks." *The triple bottom line of 21st century.*

Fink, L. Larry Fink's Annual Letter to CEOs: A Sense of Purpose. https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter. Retrieved March 16, 2018.

Fink, L. *Larry Fink's Letter to CEOs: Profit and Purpose*. (2019). BlackRock. https://www.blackrock.com/americas-offshore/2019-larry-fink-ceo-letter.

Fink, L. (2020, January). *Larry Fink's Letter to CEOs | BlackRock*. BlackRock. https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter. Retrieved March 6, 2020.

Stout, L. A. (2012). *The Shareholder Value Myth*. Berrett Keohler Publications.

Report of the Committee on The Financial Aspects of Corporate Governance. (1992). *The Cadbury Report*.