

Three Essays on Say-on-Pay

Karen Naaman

A Thesis

In

The John Molson School of Business

Presented in Partial Fulfillment of the Requirements

For the Degree of

Doctor of Philosophy (Business Administration) at

Concordia University

Montreal, Quebec, Canada

April 2021

© Karen Naaman, 2021

**CONCORDIA UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

This is to certify that the thesis prepared

By: Karen Naaman

Entitled: Three Essays on Say-on-Pay

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

Doctor Of Philosophy (Business Administration)

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. Sandra Betton	
_____	External Examiner
Dr. Francesco Bova	
_____	External to Program
Dr. Bryan Campbell	
_____	Examiner
Dr. Eduardo Schiehl	
_____	Examiner
Dr. Li Yao	
_____	Thesis Supervisor
Dr. Michel Magnan	

Approved by _____
Dr. Cedric Lesage, Graduate Program Director

Tuesday, June 1, 2021 _____
Dr. Anne-Marie Croteau, Dean
John Molson School of Business

Abstract
Three Essays on Say-on-Pay

Karen Naaman, Ph.D.

Concordia University, 2021

This dissertation comprises three essays on issues related to Say-on-Pay, a governance measure which allows shareholders to vote on executive compensation. In the first essay adopting a window-dressing perspective, I examine whether the mandatory adoption of Say-on-Pay is associated with opportunistic non-GAAP reporting to mislead shareholders about firm's performance and avoid shareholder dissatisfaction against executive compensation. The sample comprises U.S. Fortune 250 firms, from 2003 until 2017. Results show that managers increasingly disclose non-GAAP earnings and exclude recurring items after the mandatory adoption of Say-on-Pay regulation. Also, managers' exclusion choice of recurring items and the likelihood of reporting non-GAAP metrics are more pronounced during years when the firm is subject to a vote. The findings shed some light on the unintended consequences of Say-on-Pay, especially when the ethical concerns about non-GAAP reporting are raised.

The second essay integrates agency and resource dependence theories to examine the influence of compensation committee members' qualities and non-GAAP reporting on shareholders' Say-on-Pay support. Compensation committee quality is an aggregate measure of compensation committee attributes that include the directors' interdependencies, their tenure, holding a CEO position, the number of seats they hold, and committee size. Results suggest that high quality compensation committees influence shareholders to provide a support to their Say-on-Pay vote. Moreover, the quality of non-GAAP reporting is associated with shareholders' votes. Shareholders do not appear to be misled by low-quality non-GAAP metrics and managers' opportunistic motive. On the contrary, shareholders vote against executive compensation when these metrics are of low-quality. While policy makers have set the regulation to curb excessive executive pay through shareholders' votes, this study reveals that factors other than the excess pay itself may influence shareholders' perceptions.

The third essay synthesizes research on Say-on-Pay and classifies it into two categories that revolve around the determinants and consequences of Say-on-Pay. Based on the first and second essays of my dissertation, I build a conceptual model that represents two closed interconnections. The first connection is between Say-on-Pay and compensation committees.

Shareholders' Say-on-Pay votes are more favorable when compensation committee quality is high. However, when shareholders vote against executive compensation in Say-on-Pay, they also vote against the re-election of compensation committee members. The second connection of the model is between Say-on-Pay and non-GAAP reporting. The introduction of Say-on-Pay motivates managers to opportunistically report non-GAAP metrics. However, when managers report low-quality non-GAAP metrics, shareholders' Say-on-Pay votes become more negative. Thus, it appears that Say-on-Pay holds simultaneously a dual role as both a determinant and a consequence in its relation to compensation committee and non-GAAP reporting.

Keywords: *Say-on-Pay; Executive compensation; Non-GAAP earnings; Compensation committee quality; Interdependent directors; Director tenure; CEO directors; Director shareholdings; Additional directorships; Committee size.*

Acknowledgments

I would like to express my deepest gratitude to my doctoral supervisor, Professor Michel Magnan, for his excellent guidance, patience, and unconditional support over the years. I would also like to thank my committee members Professor Eduardo Schiehll and Professor Li Yao for their constructive and detailed feedback which has helped to improve my work.

I would like to acknowledge the support from the faculty members Professor Charles Draimin and Professor Ahmad Hammami both of whom gave me the opportunity to work with them and to learn from their experiences. I would also like to thank everyone in the Accountancy Department and the Research Office at John Molson School of Business for all their support. To all my PhD colleagues, thank you for making my journey more enjoyable and exciting. A very special thank you to Aya, Chaim and Nura for always being there to listen, celebrate, and laugh. Nura, I am also extremely grateful for the time you spent reading and reviewing my work. My journey would not have been the same without you.

I would be remiss if I did not mention the unconditional support that I received throughout this journey from an incredible group of loving family members. I am grateful to my sisters: Caroline and her family, Christine and her family, and Caline. Even from a distance, I have always felt their emotional and moral support. Caroline, thank you for your motherly love; you proved the saying “elder sister is always a second mother” to be true in every sense. Christine, I am so proud of you; your achievements and commitment have continually pushed me to do more and to be better. I am indebted to you and Najib for paving the way and guiding me in every step of this journey. Caline, thank you for always being there for me, no matter what. Your uplifting presence has made the hard times easier and the easy times more fun. Halim, my love, thank you for your continued belief in me, often when I did not believe in myself. You truly sailed on this journey alongside of me.

Last, but by no means least, words cannot describe my gratitude to my parents. Since I was a child, you have instilled within me a love of learning and driven me to take advantage of the opportunities ahead of me. No matter what I have sought to accomplish, you were by my side and cheered me on to achievements that have made me the person I am today. Mom, as you end your exemplary teaching career, I take over your profession with true passion. I hope to fill your shoes one day, and to continue to make you proud. Mom and Dad, I thank you for your continued support and I dedicate this dissertation to you.

Table of Contents

List of Tables	viii
Chapter 1: Introduction	1
Chapter 2: Mind the non-GAAP: Does Say-on-Pay Provoke non-GAAP Reporting?.....	6
Abstract	6
2.1 Introduction	7
2.2 Literature Review and Hypothesis Development.....	10
2.2.1 Non-GAAP Reporting	10
2.2.2 Non-GAAP Reporting and Managerial Incentive-based Motivation	13
2.2.3 Say-on-Pay	14
2.2.4 Non-GAAP Reporting and Say-on-Pay	16
2.3 Empirical design.....	17
2.3.1 Model	17
2.3.2 Measures for Non-GAAP Exclusions	19
2.3.3 Measures for Say-on-Pay	20
2.3.4 Control Variables	20
2.4 Sample Selection and Descriptive Statistics	21
2.4.1 Data Sources	21
2.4.2 Descriptive Statistics.....	22
2.5 Results	23
2.5.1 Multivariate analysis	23
2.5.2 Additional analysis.....	24
2.6 Conclusion.....	25
Chapter 3: It's not all about Pay: The influence of Compensation Committee and Non-GAAP Reporting on Say-on-Pay	27
Abstract	27
3.1 Introduction	28
3.2 Literature Review	32
3.2.1 Determinants of Say-on-Pay	32
3.2.2 Compensation Committee Quality	33
3.2.3 Non-GAAP Reporting	36
3.3 Theories and Hypothesis Development.....	38

3.4	Empirical Model.....	40
3.4.1	Model.....	40
3.4.2	Measures for Say-on-Pay Votes.....	41
3.4.3	Measures for Compensation Committee Quality.....	41
3.4.4	Measures for non-GAAP Reporting Quality	42
3.4.5	Control Variables	43
3.5	Sample Selection and Descriptive Statistics	44
3.5.1	Data Sources	44
3.5.2	Descriptive Statistics.....	44
3.6	Results	46
3.6.1	Multivariate analysis.....	46
3.6.2	Additional analysis.....	47
3.6.2.1	High versus Low Say-on-Pay Support.....	47
3.6.2.2	Principal Component Analysis for Compensation Committee Quality	48
3.6.2.3	Endogeneity for Compensation Committee Quality	48
3.7	Conclusion.....	49
	Chapter 4: The Dual Role of Say-on-Pay: Determinant and Consequence.....	51
	Abstract.....	51
4.1	Introduction	52
4.2	Literature Review Synthesis.....	54
4.2.1	Theoretical Perspectives	54
4.2.2	Determinants of Say-on-Pay	55
4.2.3	Consequences of Say-on-Pay.....	59
4.3	Conceptual Model	61
4.3.1	Say-on-Pay and Compensation Committee	61
4.3.2	Say-on-Pay and non-GAAP Reporting.....	62
4.4	Conclusion.....	66
	Chapter 5: Conclusion.....	68
	References.....	71
	Appendix.....	81

List of Tables

Table 1 Variable definition	81
Table 2 Essay 1 - Descriptive statistics of variables.....	84
Table 3 Essay 1 - Correlations between variables (Lower Pearson's correlation, upper Spearman's correlation).....	85
Table 4 Summary statistics of the likelihood of non-GAAP reporting differentiating between pre- and post- Say-on-Pay mandate	87
Table 5 Summary statistics of the likelihood of non-GAAP reporting differentiating between the firm being subject to a Say-on-Pay vote and when not.....	87
Table 6 Results of logistic regression of <i>SOP</i> and <i>SOP_YEAR</i> on the likelihood of non-GAAP reporting.....	88
Table 7 Results of regression of <i>SOP</i> and <i>SOP_YEAR</i> on the quality of non-GAAP reporting	89
Table 8 Results of regression of <i>SOP</i> and <i>SOP_YEAR</i> on the quality of non-GAAP reporting (using <i>LOSS_CONVERT</i>)	90
Table 9 Results of regressions of individual <i>CCQ</i> attributes on Say-on-Pay support.....	91
Table 10 Essay 2 - Descriptive statistics of variables.....	93
Table 11 Essay 2 - Correlations between variables (Lower Pearson's correlation, upper Spearman's correlation).....	94
Table 12 Results of regression of <i>CCQ</i> on <i>SUPPORT</i> and <i>HIGH_SUPPORT</i>	95
Table 13 Results of regression of <i>OTHER_EXCLUSIONS</i> on <i>SUPPORT</i> and <i>HIGH_SUPPORT</i>	96
Table 14 Results of regression of <i>CCQ</i> ₂ (using PCA) on <i>SUPPORT</i> and <i>HIGH_SUPPORT</i>	97
Table 15 Results of 2SLS regression of <i>CCQ'</i> on <i>SUPPORT</i>	98

Chapter 1: Introduction

The motivation to study Say-on-Pay springs from its practical importance as a channel of shareholder activism regarding executive compensation. It gives shareholders the opportunity to express their voice and vote on executive compensation. At the same time, it provides a possible avenue for boards of directors to consider communicating or modifying executive compensation arrangements, before shareholders take other drastic forms of activism, such as exit, voting against directors' re-election or litigation. Following its initiation in 2002 in the United Kingdom (UK), the Securities and Exchange Commission (SEC) introduced Say-on-Pay into practice in the United States (U.S.), in January 2011, in the aftermath of the 2007-2009 Financial Crisis and as a response to soaring executive compensation. According to the Economic Policy Institute, Chief Executive Officer (CEO) compensation skyrocketed by 1007.5% from 1978 to 2018 (Mishel & Wolfe, 2019). By contrast, the stock market growth, as proxied by the S&P 500 Index, was up 706.7% and worker compensation increased only 11.9% during the same period. Despite its significant importance and global acceptance as a governance mechanism, a debate is ongoing around the ability of Say-on-Pay to act as an effective mechanism to reduce excessive executive pay. Supporters consider that shareholders' dissent on the board's pay philosophy can pressure the board to react and modify the pay to an optimal level (Alissa, 2015; Balsam et al., 2016; Kimbro & Xu, 2016). However, there is an alternative view which opponents argue that the vote may be ignored and, worse, may even lead to suboptimal decisions (Brunarski et al., 2015; Mangan & Mangan, 2012).

While its effectiveness is yet to be determined, SEC Commissioner Robert Jackson, along with Robert Pozen, MIT senior lecturer, prepared an op-ed in April 2019 that condemns the use of non-GAAP metrics as performance targets in executive pay, especially in the absence of transparent reconciliation to GAAP metrics (Jackson & Pozen, 2019). On the heels of this op-ed, the Council of Institutional Investors (CII) submitted a petition to the SEC. The petition urges the SEC to revise and apply its rules that govern non-GAAP disclosure in press releases to the Compensation Discussion and Analysis (CD&A) section of the proxy statement (Bertsch & Mahoney, 2019). The CII is concerned about managers' opportunistic use of non-GAAP metrics to make their financial position better, thus potentially influencing shareholders'

perception ahead of their Say-on-Pay votes. However, SEC officials refused to update the rule, considering that current regulations were adequate (Ho, 2019).

Both Say-on-Pay and non-GAAP reporting are two recent key changes in corporate practices that have drastically changed the financial governance of organizations in the U.S. This dissertation aims to shed some light into the interrelations between these two practices, within the realm of Say-on-Pay. Altogether, this dissertation investigates important issues related to the interrelations between Say-on-Pay with both non-GAAP reporting and compensation committee. Specifically, the three essays address the following research questions:

1- Does the introduction of Say-on-Pay affect managers' non-GAAP reporting behavior? How do managers react through their non-GAAP reporting when the firm is subject to a Say-on-Pay vote, in comparison to when there is no subsequent vote?

2- What is the impact of compensation committee quality on shareholders' Say-on-Pay support? Also, how do shareholders react to a reduced non-GAAP reporting quality in their Say-on-Pay support?

3- Within the realm of corporate governance and reporting, what is the role played by Say-on-Pay? Does it act as a determinant or consequence in relation to non-GAAP reporting and compensation committee?

The first essay examines if and how the Say-on-Pay regulation influences non-GAAP reporting. Theoretically, Brunarski et al. (2015) rely on the window-dressing hypothesis to show that managers with low Say-on-Pay support tend to increase dividend disbursement, reduce leverage, and boost their corporate investment to appease shareholders' ire about firm performance and, ultimately, gain their support.

The essay arises from the increasing concern on the widespread use and emphasis on non-GAAP metrics (Bradshaw & Sloan, 2002; Marques, 2010; McKeon, 2018). The concern is more severe regarding the purpose underlying their disclosure. Non-GAAP metrics can be disclosed for informative purposes. However, since these metrics are typically unaudited, this raises questions as to their reliability and managers' potential opportunistic motives. Thus, I can expect that CEOs subject to a shareholders' vote on their compensation package, while

having full discretion in measurement and reporting of non-GAAP metrics, will emphasize positive non-GAAP metrics to reveal better firm performance. Leaving shareholders with a better impression of firm performance, managers will be able to placate shareholders to approve their compensation package. For a sample that comprises U.S. Fortune 250 firms from 2003 until 2017, results can be summarized in the following fashion. Consistent with window-dressing hypothesis, results show that after the adoption of Say-on-Pay, managers are motivated to increase the disclosure of non-GAAP earnings. Even worse, the regulation mandate also triggered managers' opportunistic use of non-GAAP reporting. Managers exclude recurring items from the GAAP earnings to report higher non-GAAP metrics after the introduction of Say-on-Pay. I compare the likelihood that a firm will disclose a non-GAAP earnings metric and quality of these metrics when the firm is subject to a subsequent vote and when there is no vote. Results confirm the window-dressing hypothesis that an increased likelihood and reduced quality of non-GAAP earnings disclosure are more pronounced during the years when the firm is subject to a vote compared to when it is not. This study extends the Say-on-Pay literature, as well as the non-GAAP literature. Prior studies mainly focus on the intended and visible effects of Say-on-Pay, such as its impact on executive compensation or market reaction. This study adds to the scant literature on the unintended effects of Say-on-Pay. The study also adds to prior research that identify the incentive-based motivation to opportunistic non-GAAP reporting. Finally, the study raises the call for the ethical concerns of non-GAAP reporting.

The second essay examines how the quality of a firm's compensation committee and of its non-GAAP reporting influence shareholders' perception of executive compensation. Against this backdrop, I examine if the attributes of directors on the compensation committee, in other words its quality, influence shareholders' Say-on-Pay votes. Moreover, based upon CII's fear that non-GAAP metrics may be disclosed opportunistically for the purpose of artificially inflating firm performance, I examine the impact of low-quality non-GAAP metrics on shareholders' Say-on-Pay support.

First, I investigate the influence that compensation committee attributes can play on shareholders' Say-on-Pay votes. After the 2008 financial crisis and the enactment of the Dodd-Frank Wall Street Reform and Consumer Protection Act in 2010, increased pressure is put on the compensation committee. It is now widely considered the most difficult role on the board (Reda et al., 2014). On one hand, the compensation committee has to be cautious in adequately

compensating executives to retain the best talent. On the other hand, as fiduciaries for shareholders, their role is to compensate executives for the best operating results and at a minimum cost. Otherwise, Reda et al. (2014) fear that bad compensation designs may lead to shareholder revolts. Accordingly, to qualify for this position, compensation committee members should have sufficient attributes to fit for this position as resource providers for an adequate compensation design, while at the same time as monitors able to say “no” to managers for excess compensation. By integrating agency and resource dependence theories, I examine the impact of an aggregate score of compensation committee quality on shareholders’ Say-on-Pay votes. The aggregate measure includes variables representing the proportion of interdependent directors, their tenure, holding a CEO position, the number of seats they hold, and committee size. Results show that the quality of the compensation committee influences shareholders in their perception of executive compensation, and so gaining their support for Say-on-Pay. Second, I address the concern of whether shareholders are misled by managers’ opportunistic behavior of reporting non-GAAP metrics. I examine the impact of the quality of non-GAAP metrics on shareholders’ support. Results show an association between non-GAAP reporting quality and Say-on-Pay support. However, the negative association assures regulators and the public that shareholders are not misled by managers’ opportunistic non-GAAP reporting. On the contrary, shareholders can understand managers’ motivation and penalize them for attempting to artificially inflate firm performance. Thus, they express their dissent on their compensation packages.

The second essay extends the Say-on-Pay literature by examining additional factors, beyond executive compensation, that can have an influence on shareholders’ Say-on-Pay voting decisions. It also adds to the non-GAAP literature that aims to identify the consequences of non-GAAP reporting, especially that this performance measure is unaudited. Finally, policy makers would be aware of any unrecognized factors that may influence shareholders’ Say-on-Pay judgements about CEO’s compensation package. While policy makers have set the regulation to curb excessive executive pay through shareholders’ votes, this study reveals that factors other than excess pay itself may influence their perceptions. However, shareholders are not deceived by opportunistic motives.

In the third essay, I synthesize the literature on Say-on-Pay. Extensive literature examines the determinants and consequences of Say-on-Pay. On one hand, the essay shows that agency theory is the prevalent theoretical perspective in the literature. Say-on-Pay is

considered an external governance mechanism that reduces excess pay through shareholders expressing their opinion. From an agency-based theoretical perspective, this intervention enhances the process of monitoring managers and improves the alignment of executive compensation with performance. On the other hand, the essay classifies prior research into two categories. The first category identifies the studies that examine the influence of determinants on Say-on-Pay support. The second category discusses the contradictory evidence of the impact of Say-on-Pay on executive compensation and other consequences. Most prior research examines the associations of different factors to Say-on-Pay from one perspective. The research investigates either the factors that influence Say-on-Pay or its consequences. However, this essay builds a conceptual model to show that concepts are interrelated. The model represents, first, the interrelation between compensation committees and Say-on-Pay. It also illustrates the interconnection between non-GAAP reporting quality and Say-on-Pay. Research should not be limited to focus on one side of the story. For instance, it is worrisome that managers inflate earnings to justify their compensation package and gain shareholders' support. However, we should also notice that it is Say-on-Pay regulation that has boosted managers' engagement in such unethical disclosure.

The rest of the dissertation is organized as follows. The next three chapters present the three essays. The fifth chapter covers the conclusion, limitations, and directions for future research.

Chapter 2: Mind the non-GAAP: Does Say-on-Pay Provoke non-GAAP Reporting?

Abstract

Say-on-Pay is a governance mechanism that has gained global acceptance. While Say-on-Pay is practiced through different forms, it essentially provides shareholders the right to vote on executive compensation. In the U.S., the SEC requires that not less frequently than once every 3 years, firms must hold a non-binding shareholder vote to approve the compensation of executives, along with a non-binding vote on the frequency of future Say-on-Pay votes. The information for these votes is submitted in the proxy statement. Adopting a window-dressing perspective, this study examines whether the mandatory adoption of Say-on-Pay is associated with opportunistic non-GAAP reporting to mislead shareholders about a firm's performance and avoid shareholder dissatisfaction against executive compensation. The sample comprises U.S. Fortune 250 firms, from 2003 until 2017. Results show that managers increasingly disclose non-GAAP earnings and exclude recurring items after the mandatory adoption of Say-on-Pay regulation. Also, managers' exclusion choice of recurring items and the likelihood of reporting non-GAAP metrics are more pronounced during years when the firm is subject to a Say-on-Pay vote. The findings shed some light on the unintended consequences of Say-on-Pay, especially when the ethical concerns about non-GAAP reporting are raised.

Keywords: *Say-on-Pay; Executive compensation; Non-GAAP earnings; Special items; Recurring items*

2.1 Introduction

On April 29, 2019, the Council of Institutional Investors (CII) petitioned the U.S. Securities and Exchange Commission (SEC) “to require clear disclosure on the use of non-GAAP financial metrics in the proxy statement Compensation Discussion & Analysis (CD&A)” (Bertsch & Mahoney, 2019). The CII asked the SEC to apply the same rules and guidance mandated for other earnings releases, e.g., Regulation G, to the CD&A. The members of the CII expressed concern that clarity is especially appropriate in the CD&A context because it is the most important source of information used by shareholders to cast advisory votes on executive compensation as required by the Say-on-Pay regulation mandated by SEC since 2011.

This study directly addresses the issue raised by the CII. It examines the effect of the mandatory adoption of Say-on-Pay regulation on the likelihood that managers disclose non-GAAP earnings and the quality of these earnings. Moreover, shareholders’ votes on CEO compensation are to be held either annually, biennially, or triennially. Thus, this study compares the effect of a Say-on-Pay vote on the likelihood and quality of non-GAAP earnings during a year subject to a vote in comparison to a non-voting year.

From a governance perspective, the widespread use of non-GAAP performance metrics in the determination of executive compensation and in CD&A disclosure raises several concerns. For instance, in contrast to GAAP metrics such as earnings, non-GAAP metrics are typically unaudited and not subject to any measurement standard, thus raising questions as to their reliability and even relevance. Hence, with CEOs facing a shareholders’ vote on the CD&A while having wide discretionary latitude in the measurement of non-GAAP metrics, it can be expected that they will emphasize positive non-GAAP performance metrics that suggest a firm is performing well. Such an orientation brings two benefits as it will directly feed onto their compensation and will leave shareholders with a better impression of the relation between performance and compensation.

An ongoing debate focuses on whether managers disclose non-GAAP earnings to inform or mislead shareholders about firm performance. Non-GAAP earnings may be reported to inform investors about firm’s core earnings by excluding non-recurring items. However, regulators have expressed concern that these financial metrics may be used opportunistically

to mislead shareholders by excluding recurring items that are beyond a one-time gain or loss. Similarly, Say-on-Pay regulation has been subject to a huge debate. Supporters argue that shareholders' right to vote on CEO's compensation acts as an external governance tool that is able to reduce the excessive CEO pay. Opponents, however, argue that the vote is non-binding in some countries and thus may be ignored. Moreover, evidence has shown that overcompensated managers with low shareholder support on their compensation would tend to appease shareholders and justify poor performance by increasing dividend disbursement and corporate investment, while reducing leverage (Brunarski et al., 2015). Similarly, based on the window-dressing hypothesis, this study assumes that managers would tend to appease shareholders for Say-on-Pay support by revealing good firm performance through the disclosure of non-GAAP earnings.

The study is conducted on a sample of Fortune 250 firms over the period from 2003 until 2017. Based on the window-dressing hypothesis and the increased reliance on non-GAAP earnings metrics in CEO's compensation package, I expect that after the mandatory adoption of Say-on-Pay in the U.S. since 2011, managers are more likely to report non-GAAP earnings in their press releases. Moreover, these earnings are expected to be of lower quality with the opportunistic intention of managers to better represent firm performance to shareholders and justify their compensation package. Furthermore, I expect that managers are more likely to report non-GAAP earnings and disclose non-GAAP earnings of low quality when they are subject to a shareholder vote. Consistent with the hypotheses, the findings indicate that the mandatory adoption of Say-on-Pay regulation is positively and significantly associated with managers reporting non-GAAP earnings, as well as increasingly excluding recurring items from their non-GAAP metrics. Moreover, managers tend to report more non-GAAP earnings and exclude recurring items when the firm is subject to a shareholder Say-on-Pay vote in comparison to a year when the firm is not subject to a vote.

Revisiting the issues of both non-GAAP reporting and Say-on-Pay seems timely. First, non-GAAP reporting is an area of concern for the SEC. For instance, since the mid-2010 until mid-2018, while the number of comment letters issued by the SEC on financial reporting matters has shown a sharp decline, the number of comments letters addressing specifically non-GAAP metrics has been steadily increasing (Hallas & Usvyatsky, 2018). This illustrates SEC's heightened scrutiny to protect shareholders from being potentially misled by non-GAAP numbers that conceal weak financial performance. Although SEC has put effort in regulating

non-GAAP disclosure in press releases through Regulation G, more calls have been raised to adopt the strict regulations to all types of disclosures, especially that the use of non-GAAP earnings is being adopted at a fast pace. Similarly, Say-on-Pay is a highly adopted regulation in different forms across several countries. SEC is continuously looking forward to update the regulation and its requirements as to limit the excessiveness of CEO compensation. Thus, it is crucial to understand the significance of shareholders' Say-on-Pay regulation on managers' disclosure practice.

This study has both academic and practical contributions. From an academic perspective, results of this study add to the accounting literature on several dimensions. First of all, this study contributes to the non-GAAP literature. Prior literature has mainly examined the effect of SEC scrutiny and Regulation G (2002) on disciplining managers to report non-GAAP metrics for informative purposes, rather than for opportunistic motives. They examine whether the quality of exclusions has improved following the regulation (Black et al., 2017a; Jennings & Marques, 2011; Kolev et al., 2008). Moreover, literature has focused on two main factors that incentivize managers to report non-GAAP earnings metrics, which are meeting or beating earnings benchmarks and compensation contracting. While the literature has mainly found that compensation contracts motivate managers to opportunistically report non-GAAP metrics, prior studies do not consider shareholders' influence provided to them through the Say-on-Pay regulation on managers' non-GAAP reporting. Thus, the findings of this study add to the literature to identify that Say-on-Pay acts as an additional factor of motivation for managers to opportunistically report non-GAAP metric.

Second, this study adds to prior research that mainly examines the association between non-GAAP earnings disclosure and CEO compensation incentives. For instance, some studies focus on the use of non-GAAP earnings in proxy statements for performance evaluation (Black et al., 2018; Curtis et al., 2021). Others focus on the association between CEO compensation contracts and managers' non-GAAP reporting behavior (Guest et al., 2021; Isidro & Marques, 2013). However, to the best of my knowledge, prior research does not consider the potential implications from shareholders' involvement and their right to vote on CEO's compensation package according to the Say-on-Pay regulation mandated by SEC in 2010.

This study also adds to the literature on the effects of Say-on-Pay specifically and shareholders' voice in general. While researchers have mainly focused on the "intended"

effects, such as on CEO compensation and market reaction, few have examined the “unintended” ones. Evidence has been mixed regarding whether Say-on-Pay acts an effective governance mechanism to reduce CEO compensation or instead increases it (Alissa, 2015; Brunarski et al., 2015; Cuñat et al., 2016; Kimbro & Xu, 2016). Regarding the “unintended” effects, Say-on-Pay has been found that it unintentionally leads to an opportunistic behavior of managers in which they would increase dividend disbursement and corporate investment, and reduce leverage to gain shareholder satisfaction on their compensation (Brunarski et al., 2015). Thus, this study adds to the limited literature to examine the “unintended” effect of Say-on-Pay on opportunistic non-GAAP reporting.

Practically, this study will help investors and policy makers be aware of the unintended consequences of Say-on-Pay regulation that has been mandated by SEC. Policy makers, especially in countries voluntarily adopting Say-on-Pay, will be able to determine if it is valuable to mandate Say-on-Pay, and investors will be able to rationally decide whether to voluntarily adopt Say-on-Pay, without just following the trend. Specifically, the SEC would be able to realize the current unintended consequences of Say-on-Pay. Moreover, the SEC will heighten the need for regulating non-GAAP reporting across all types of disclosures. Given the influence managers have on financial reporting, it is crucial that they exercise it in an ethical manner. This study will provide an additional call for the ethical concerns of non-GAAP reporting raised by the SEC. Finally, investors will also be aware of any deceiving action that managers may intend to perform through non-GAAP reporting behavior in favor of shareholders’ votes.

The remainder of the paper proceeds as follows: the next section reviews the relevant literature and develops the hypotheses. Section 3 describes the research design. Section 4 details the sample selection with the descriptive statistics and section 5 discusses the empirical results. Finally, section 6 concludes the paper.

2.2 Literature Review and Hypothesis Development

2.2.1 Non-GAAP Reporting

Non-GAAP financial measures, also known as “pro forma” or “adjusted” earnings, are customized performance measures voluntarily disclosed by managers in firms’ press releases. As defined by SEC (2002), “non-GAAP financial measures will not include financial measures

that are required to be disclosed by GAAP, Commission rules or a system of regulation that is applicable to a registrant.” The motivation for managers to report non-GAAP financial measures is heavily debated. On one side, managers claim that they disclose non-GAAP earnings to help investors in evaluating the performance of firm’s core operations. On the other side, since non-GAAP earnings disclosures are unaudited, managers have full discretion in inflating investors’ perceptions of firm’s core operations. Although non-GAAP reporting is a voluntary managerial decision, almost all large public companies now disclose non-GAAP metrics in their financial statements (Katz & McIntosh, 2019). According to Audit Analytics, 97 percent of the S&P 500 firms reported at least one non-GAAP metric in their financial statement during 2017; a percentage that has significantly increased from 60 percent in 1996 (McKeon, 2018). Not only the increased frequency of non-GAAP reporting has raised a concern, but also the quality of those disclosed numbers. Factset Earnings Insight statistics show that the average difference between the reported GAAP EPS and non-GAAP EPS for Dow Jones Industrial Average companies increased from 11.8 percent to 30.7 percent in fiscal years ending 2014 and 2015, respectively (Butters, 2016). Moreover, while the reported GAAP EPS have an average year-over-year decrease of 12.3 percent between 2014 and 2015, non-GAAP EPS numbers have only shown a 4.8 percent decrease.

Basically, the ongoing debate focuses on whether managers disclose non-GAAP earnings to inform or mislead, and prior empirical work supports both views. The primary purpose of reporting non-GAAP metrics is to inform investors about firm’s core earnings. Siegel (2014), a FASB member, expresses, in his column in the FASB Outlook, that “the combination of non-GAAP data outside the financial statements with information residing within the audited financial statements is more impactful than either dataset on its own.” Moreover, BlackBerry company, in its 2021 press release, reports that “its management evaluates the performance of the company's business on a non-GAAP basis and believes that these metrics provide readers of the company's financial statements with a consistent basis for comparison across accounting periods and are useful in helping readers understand its operating results and underlying operational trends.” BlackBerry’s disclosure is consistent with reporting practices of several other firms. Thus, to provide informative non-GAAP earnings, managers exclude non-recurring items (i.e. one-time gains or one-time expenses), referred to as special items, that are deemed to be uninformative in order to represent firms’ core earnings. Some examples of special items that are commonly excluded from GAAP earnings include

asset impairments, amortization of intangibles, restructuring charges, mark-to-market charges and realized gains or losses on sales of assets.

Consistent with this motivation, Bhattacharya et al. (2003) and Lougee and Marquardt (2004) find that non-GAAP earnings serve an informative purpose because they better represent firm's core operations than GAAP earnings. Brown and Sivakumar (2003) also consider that non-GAAP operating income has greater information content than either earnings per share from operations or earnings per share before extraordinary items and discontinued operations. In a sample of S&P 500 firms, Albring et al. (2010) find that non-GAAP earnings are more value relevant than GAAP operating earnings. Focusing on large Canadian firms, Cormier et al. (2017) assess the value relevance and predictability of a particular non-GAAP measure, EBITDA. The authors find that EBITDA disclosure is associated with greater analyst following and with less information asymmetry. Moreover, the disclosure of EBITDA measure enhances the positive relationship between earnings and stock pricing as well as future cash flows. However, EBITDA is less impactful on this association in the presence of strong governance, suggesting a substitution relation between EBITDA disclosure and governance. Finally, Curtis, McVay and Whipple (2013) confirm that managers' most pervasive motivation is to inform investors about firm's operating performance. However, they still find a significant proportion of firms that appear to behave opportunistically by reporting non-GAAP metrics only when they need to enhance investors' perception about firm's core earnings. Similarly, Choi and Young (2015) reveal that the informative and opportunistic drives for non-GAAP earnings disclosure co-exist. Managers report non-GAAP earnings for informative (strategic) purpose when their GAAP earnings exceed (fall short of) market expectations.

There is also extensive research on the other side of the debate that centers around managers' opportunistic motivation in reporting non-GAAP metrics. Black et al. (2017b) and Doyle et al. (2013) find that non-GAAP reporting acts as a tool to manipulate earnings. By focusing on the income trust industry in Canada, Cormier et al. (2011) show that the calculation of distributable cash, as a non-GAAP measure, appears to follow a smoothing pattern, a practice close to earnings management. Since non-GAAP reporting is unaudited and less costly, managers appear to report non-GAAP earnings when they are constrained from engaging in real and accruals management and the operating performance is poor. Managers would exclude recurring items that are beyond a one-time gain or loss. More frequently, they would exclude recurring expenses such as depreciation and amortization, research and

development, and stock-based compensation in order to meet their strategic targets such as meeting analysts' expectations or achieving operating profit (Black & Christensen, 2009; Doyle et al., 2013). For instance, Barth et al. (2012) show that managers opportunistically exclude stock-based compensation expense to inflate firm performance and meet earnings benchmarks. Doyle et al. (2003) report that items excluded from non-GAAP earnings are predictive of future performance, so these exclusions are far from being unimportant. Moreover, the strong increase in non-GAAP metrics and reporting non-GAAP earnings that exceed GAAP earnings provide evidence on the opportunistic motive of non-GAAP reporting (Aubert, 2009; Webber et al., 2013). Baumker et al. (2013) show that managers are less likely to exclude transitory gains from their non-GAAP metrics in the absence of non-recurring losses. Moreover, firms with less value-relevant or poor GAAP earnings would tend to place greater emphasis on non-GAAP earnings relative to GAAP earnings (Bowen et al., 2005). In a large European context, Isidro and Marques (2015) find that managers are more willing to report non-GAAP metrics opportunistically and exclude recurring items from the metrics when they are exposed to pressure to meet earnings benchmarks with limited opportunity to manipulate GAAP earnings.

2.2.2 Non-GAAP Reporting and Managerial Incentive-based Motivation

Prior research focuses on two main incentives that drive managers to report non-GAAP financial measures and exclude recurring items from the metrics: meeting or beating earnings benchmarks and compensation contracting concerns. First, managers have a higher incentive to opportunistically disclose non-GAAP metrics and exclude recurring expenses from the metrics when they have to meet or beat earnings benchmark while their GAAP earnings fall short (Barth et al., 2012; Bhattacharya et al., 2003; Black & Christensen, 2009; Doyle et al., 2003, 2013; Isidro & Marques, 2015). Second, managers tend to report non-GAAP earnings to investors to influence the board to increase their pay, knowing that the excessive pay is not justified by firm's stock price or GAAP earnings performance (Guest et al., 2021). Consistent with short-termism, CEOs with relatively strong short-term bonus plan (long-term performance plan) incentives are more (less) likely to report non-GAAP earnings opportunistically (Black et al., 2021). Moreover, evidence shows that a substantial percentage of large firms are compensated based on adjusted earnings (Black et al., 2018; Curtis et al., 2021; Guest et al., 2021), and some opportunistic CEOs take advantage of being evaluated based on adjusted earnings to artificially inflate annual bonuses (Curtis et al., 2021). Moreover, Cormier et al.

(2011) show that Income Trusts are more likely to disclose discretionary distributable cash when managers hold higher in-the-money stock options. Consistent with their opportunistic use of non-GAAP reporting, managers are more likely to report non-GAAP earnings and exclude recurring items after the clawback adoption (Kyung et al., 2019).

However, boards can discipline managers from engaging in opportunistic non-GAAP reporting when compensation contracts explicitly state that these managers will be evaluated based on non-GAAP metrics (Black et al., 2018; Black et al., 2021). Thus, evidence on the association between compensation contracts and managers' opportunistic non-GAAP reporting is mixed. However, prior literature does not consider the effect of the introduction of Say-on-Pay regulation and shareholders' approval on compensation contracts on managers' non-GAAP reporting behavior.

2.2.3 Say-on-Pay

Say-on-Pay, a globally accepted governance mechanism practiced through different forms, provides shareholders the right to vote on executive compensation. Since its appearance in 2002, the practice of Say-on-Pay has garnered considerable interest from investors and policy makers and has been subsequently adopted in many countries. For instance, in 2010, Section 951 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank) was signed into law. The act requires that not less frequently than once every 3 years, a separate resolution, subject to a non-binding shareholder vote to approve the compensation of executives, be submitted in the proxy statement (The Dodd-Frank Act, 2010). The act also mandates firms to disclose a non-binding vote on the frequency of future Say-on-Pay votes (known as "Say-When-On-Pay" vote) with a choice between an annual, a biennial or a triennial frequency. Thus, Say-on-Pay has started to be implemented in the U.S. since January 2011, but since January 2013 for small issuers or those with a stock market capitalization of less than \$75 million. Despite its increasing global acceptance as a governance mechanism, the effectiveness of Say-on-Pay is still greatly debated.

Supporters argue that shareholders' dissent on the board's pay philosophy acts as an external governance tool. Shareholders can pressure the board to react and avoid financial and non-financial (e.g., reputation, power and honor) consequences by modifying CEO pay either proactively or following the vote in favor of shareholders' and proxy advisors' votes (Balsam et al., 2016), or by even forcing the CEO out of office (Alissa, 2015). Also, supporters argue

that with managers, instead of shareholders, having the power to elect board directors and ensuring a higher compensation, Say-on-Pay regulation may better be able to align owner-manager interests and offset CEO power for an optimal pay (Cai & Walkling, 2011; Mangel & Magnan, 2012).

On the other hand, there are arguments that since the vote is non-binding in some countries, it may be ignored without imposing high enough costs to the board to trigger a reaction (Alissa, 2015; Correa & Lel, 2016). In the worst case, shareholders interfering in CEO pay may ultimately destroy firm value by putting unwarranted pressure on the board, which possesses the complete knowledge of what constitutes a fair pay, to make suboptimal decisions that cater to shareholders (Alissa, 2015; Cai & Walkling, 2011). This in turn can give rise to a conflict with other firm stakeholders who are less risk-seekers and have different interests compared to shareholders (Mangel & Magnan, 2012).

The conflicting results of the empirical literature also undermine the premise that Say-on-Pay is the solution for CEO pay problem. On one hand, Say-on-Pay is found to play an effective monitoring role in firms' corporate governance. For instance, shareholders disapprove of high or excess CEO compensation (Kimbrow & Xu, 2016). Moreover, boards do respond to shareholders' dissatisfaction by reducing excess CEO compensation or by forcing the CEO out of office (Alissa, 2015). Also, after the introduction of Say-on-Pay regulation, CEO pay growth rates declined, controversial components of CEO pay are removed, and the sensitivity of CEO pay to firm performance improves in firms with high excess pay, negative performance and weak governance across large samples of cross-country and country-specific firms (Correa & Lel, 2016; Ferri & Maber, 2013).

On the other hand, another stream of literature questions the effectiveness of Say-on-Pay. For instance, boards often do not respond to shareholders' dissatisfaction and thus ignore any required change to the compensation package by voluntary adopters of Say-on-Pay in the U.S. (Cuñat et al., 2016). After the regulation was mandated, a low support was associated with a pay increase during the first year following the SEC mandate (Brunarski et al., 2015). Based on the window-dressing hypothesis, overcompensated managers with low Say-on-Pay support tend to appease shareholders and justify poor performance by increasing dividend disbursement and corporate investment, while reducing leverage (Brunarski et al., 2015).

2.2.4 Non-GAAP Reporting and Say-on-Pay

From a positive viewpoint, if Say-on-Pay is to be considered an effective governance mechanism, then it should be associated with a lower likelihood that managers would report non-GAAP financial metrics, and the reported non-GAAP metrics would be of better quality. This would be consistent with prior findings about the effectiveness of governance mechanisms, such as debt covenants and board independence, in reducing the likelihood and enhancing the quality of non-GAAP reporting (Christensen et al., 2019; Frankel et al., 2011).

However, Say-on-Pay research shows that managers may behave opportunistically to obtain shareholders' approval on the compensation package. They may intend to reveal to shareholders good firm performance, since better firm performance, whether financial or non-financial, is associated with lower shareholder dissatisfaction against executive compensation (Balsam et al., 2016; Cullinan et al., 2017). Moreover, consistent with the window-dressing hypothesis, overcompensated managers with low Say-on-Pay support tend to increase dividend disbursements, research and development expense, and capital expenditure and decrease leverage over the remainder of that year in an attempt to appease shareholders for subsequent Say-on-Pay approval (Brunarski et al., 2015). Moreover, firms try to obfuscate their excess executive payments by disclosing less readable and biased remuneration reports (Hooghiemstra et al., 2017; Mangen & Magnan, 2012).

Moreover, Hadley (2017) finds that firms report alternative pay measures (pocketed pay, market-value pay, and peer comparison) in their pay for performance disclosure to influence subsequent Say-on-Pay votes. While "pocketed" pay reporting reveals managers' opportunistic motive, "peer comparison" measures are reported for informativeness. Although, the growth in support is more pronounced to "peer comparison" reporters, both motives of reporting were associated with increased shareholder support. Thus, results suggest that Say-on-Pay enhances managerial motivation to engage in opportunistic behavior. Adding to that, non-GAAP metrics disclosed in press releases are unaudited. Thus, opportunism can affect managers' exclusion choices and managers are relieved from scrutiny. Hence, the first set of hypotheses:

Hypothesis 1a: After the mandatory adoption of Say-on-Pay, the likelihood of non-GAAP reporting increases.

Hypothesis 1b: After the mandatory adoption of Say-on-Pay, non-GAAP reporting quality decreases.

According to the Dodd-Frank Act, shareholders also have the right to hold a non-binding vote on the frequency of future Say-on-Pay votes, known as Say-When-On-Pay, with a choice between an annual, a biennial or a triennial frequency. Extremely limited research has considered the differences associated with adopting different frequencies. In particular, Ferri and Oesch (2016) find that shareholders are influenced by managers' recommendations of adopting a particular frequency. Moreover, firms adopting a triennial frequency, following management recommendation, were significantly less likely to change their compensation practices in response to adverse Say-on-Pay votes compared to firms that adopted an annual frequency. Thus, shareholders, following a triennial frequency recommended by managers, give up from their monitoring power due to their huge trust with their managers (Ferri & Oesch, 2016). Moreover, by referring to the window-dressing hypothesis, I consider that managers tend to appease shareholders of good firm performance when they are subject to a vote. Accordingly, the second set of hypotheses assume the following:

Hypothesis 2a: The likelihood of non-GAAP reporting increases during years subject to a vote more than during non-voting years.

Hypothesis 2b: Non-GAAP reporting quality decreases during years subject to a vote more than during non-voting years.

2.3 Empirical design

2.3.1 Model

To determine the effect of the mandatory adoption of Say-on-Pay on the likelihood that managers would report non-GAAP earnings as developed in hypothesis (1a), I develop the first model based on Heflin and Hsu (2008):

$$\begin{aligned}
 Prob(NG = 1)_{ij} = & \lambda(a_0 + a_1SOP_j + a_2EXCESSCOMP_{ij} + a_3TCOMP_{ij} + a_4COMP_GROWTH_{ij} \\
 & + a_5ROA_{ij} + a_6RETURN_{ij} + a_7LOSS_{ij} + a_8SIZE_{ij} + a_9BSIZE_{ij} + a_{10}BINDEP_{ij} + \\
 & a_{11}TOP5INSTOWN_{ij} + a_{12}TENURE_{ij} + fixed\ year\ effect + e_{ij})
 \end{aligned}
 \tag{Eq. 1a}$$

Similarly, I develop the second model to determine the effect of the frequency of Say-on-Pay adoption on the likelihood of non-GAAP reporting as developed in hypothesis (2a):

$$Prob(NG = 1)_{ij} = \Lambda(a'_0 + a'_1SOP_YEAR_{i,j+1} + a'_2EXCESSCOMP_{ij} + a'_3TCOMP_{ij} + a'_4COMP_GROWTH_{ij} + a'_5ROA_{ij} + a'_6RETURN_{ij} + a'_7LOSS_{ij} + a'_8SIZE_{ij} + a'_9BSIZE_{ij} + a'_{10}BINDEP_{ij} + a'_{11}TOP5INSTOWN_{ij} + a'_{12}TENURE_{ij} + fixed\ year\ effect + e'_{ij}) \quad (Eq. 2a)$$

$\Lambda(.)$ represents the logistic response function $e^{ax}/(1 + e^{ax})$. NG equals one if the firm discloses non-GAAP earnings in year j and zero otherwise. SOP_j equals one if year j represents year 2011 or later and zero otherwise. If the Say-on-Pay regulation increased the likelihood that firms disclose non-GAAP earnings, I expect a positive a_1 estimate. $SOP_YEAR_{i,j+1}$ equals one if firm i is subject to a subsequent Say-on-Pay vote. Since the non-binding Say-on-Pay vote could be held annually, biennially or triennially, firms subject to a subsequent vote may more likely report non-GAAP metrics at the end of the period subject to a vote. Thus, I expect a positive a'_1 estimate.

For hypotheses (1b) and (2b), I examine the effects of Say-on-Pay mandatory adoption and the frequency of its adoption on the quality of non-GAAP earnings reported by managers. Thus, I develop the second models:

$$OTHER_EXCLUSIONS_{ij} = \Lambda(b_0 + b_1SOP_j + b_2EXCESSCOMP_{ij} + b_3TCOMP_{ij} + b_4COMP_GROWTH_{ij} + b_5ROA_{ij} + b_6RETURN_{ij} + b_7LOSS_{ij} + b_8SIZE_{ij} + b_9BSIZE_{ij} + b_{10}BINDEP_{ij} + b_{11}TOP5INSTOWN_{ij} + b_{12}TENURE_{ij} + fixed\ year\ effect + e_{ij}) \quad (Eq. 1b)$$

$$OTHER_EXCLUSIONS_{ij} = \Lambda(b'_0 + b'_1SOP_YEAR_{i,j+1} + b'_2EXCESSCOMP_{ij} + b'_3TCOMP_{ij} + b'_4COMP_GROWTH_{ij} + b'_5ROA_{ij} + b'_6RETURN_{ij} + b'_7LOSS_{ij} + b'_8SIZE_{ij} + b'_9BSIZE_{ij} + b'_{10}BINDEP_{ij} + b'_{11}TOP5INSTOWN_{ij} + b'_{12}TENURE_{ij} + fixed\ year\ effect + e'_{ij}) \quad (Eq. 2b)$$

If the Say-on-Pay regulation affects managers to engage in opportunistic motive to appease shareholders of good firm performance and save their compensation package, the quality of non-GAAP reporting would decrease by an increased exclusion of recurring items. Thus, I expect positive b_1 and b'_1 estimates.

2.3.2 Measures for Non-GAAP Exclusions

Consistent with several prior studies, this study defines non-GAAP earnings as the I/B/E/S split-unadjusted actual earnings per share (Chen et al., 2012; Cheng, 2017; Doyle et al., 2003, 2013; Heflin & Hsu, 2008; Kolev et al., 2008). Since analysts make adjustments to the non-GAAP numbers reported by managers in press releases, I acknowledge that I/B/E/S actual earnings is not a perfect proxy for the non-GAAP figures disclosed by managers. However, consistent with prior studies (Doyle et al., 2003; Heflin & Hsu, 2008; Kolev et al., 2008), I find a 90 percent overlap between the actual reported non-GAAP earnings by managers and the amounts disclosed by I/B/E/S in 350 randomly selected press releases. Moreover, as insiders with superior information about the operations in the firm, managers are able to influence analysts' estimated earnings reported in I/B/E/S (Christensen et al., 2011). I/B/E/S flags whether the reported non-GAAP earnings number is basic or diluted earnings per share. Thus, GAAP earnings per share refers to Compustat earnings per share before extraordinary items and discontinued operations (Compustat #9 or #19, depending on the reported basis of the I/B/E/S actual earnings: diluted or basic respectively).

First, following prior literature (Cheng, 2017; Heflin & Hsu, 2008; Kolev et al., 2008), I identify *NG* as an indicator variable of non-GAAP earnings disclosure. *NG* is a binary variable equal to 1 if the absolute value of the difference between GAAP and I/B/E/S actual earnings is non-zero. Second, I examine the quality of non-GAAP earnings that represents the degree to which the non-GAAP earnings exclude a recurring item. Non-GAAP earnings are considered of “high-quality” if the non-GAAP measure well represents the core earnings of the company by excluding non-recurring items. On the other hand, non-GAAP earnings are considered to be of “low-quality”¹ if managers exclude recurring items from the earnings in order to mislead investors about firm performance (Kolev et al., 2008; Kyung et al., 2019). Thus, to measure non-GAAP earnings quality, I follow the procedure used by prior literature (Doyle et al., 2003, 2013; Kolev et al., 2008). Total non-GAAP exclusions, ***TOTAL_EXCLUSIONS***, is calculated

¹ Prior research argues that exclusions of recurring items are considered “low-quality” exclusions, leading to “low-quality” non-GAAP disclosure (Doyle et al., 2003; Christensen, 2007; Kolev et al., 2008; Frankel et al., 2011). The studies conclude that recurring items are related to future operating earnings and cash flows, which casts doubt on the appropriateness of excluding them and reflects on managerial opportunism (e.g., Doyle et al. 2003, Kolev et al. 2008). Thus, more recent studies have followed prior findings in defining the exclusion of recurring items as “low-quality” or “aggressive” disclosure (Chen et al., 2021; Christensen et al., 2014, 2019).

as the difference between non-GAAP earnings per share and GAAP earnings per share. I transform all variables to a basic per share basis by multiplying the variables by the ratio of basic earnings per share to diluted earnings per share, both before extraordinary items (Compustat #19/#9), or by the dilution factor provided by I/B/E/S if item #9 or item #19 is missing or zero. After having all variables on the same per share basis, I decompose total non-GAAP exclusions into special items (non-recurring items) and other exclusions (recurring items). *SPECIAL_ITEMS* is defined as the difference between earnings per share from operations (Compustat #177) and GAAP earnings per share. *OTHER_EXCLUSIONS* is defined as total non-GAAP exclusions less special items. If total exclusions, special items, and/or other exclusions is positive, then an income-decreasing item (i.e. expense or loss) has been excluded from GAAP earnings.

2.3.3 Measures for Say-on-Pay

Two measures for Say-on-Pay are used to determine the association between Say-on-Pay and non-GAAP reporting. First, I define a pre- and post-period to examine the effect of Say-on-Pay mandatory adoption on non-GAAP exclusions. Thus, a binary variable, *SOP*, is included to identify the period after which Say-on-Pay was mandated, i.e. after 2011. Second, to differentiate the non-GAAP reporting behavior during vote and non-vote years, I identify a binary variable, *SOP_YEAR*, which represents whether the year corresponds to a voting year with reference to Say-When-on-Pay or a non-voting year.

2.3.4 Control Variables

Say-on-Pay is a shareholder vote on CEO compensation. Thus, CEO pay structure is a primary determinant and motivator of non-GAAP reporting when Say-on-Pay is mandated and associated with shareholder dissatisfaction. Following prior literature, I control for different CEO pay measures that are associated with shareholder dissatisfaction, such as total compensation (*TCOMP*) (Kimbrow & Xu, 2016), excess compensation (*EXCESSCOMP*) and compensation growth (*COMP_GROWTH*) (Balsam et al., 2016; Cai & Walkling, 2011). Compensation data is collected from Execucomp.

Excess Compensation is estimated as the difference between the compensation actually paid to the CEO and the expected compensation following Core et al. (2008) model (e.g. Alissa, 2015; Brunarski et al., 2015; Hadley, 2017). It refers to the error term (u_i) from a pooled cross-

sectional OLS regression of the natural logarithm of CEO compensation on proxies of firm economic determinants (Eq. 3):

$$TCOMP_{i,j} = \beta_0 + \beta_1 * TENURE_{i,j} + \beta_2 * RETURN_{i,j} + \beta_3 * RETURN_{i,j-1} + \beta_4 * SALES_{i,j-1} + \beta_5 * BTM_{i,j-1} + \beta_6 * ROA_{i,j} + \beta_7 * ROA_{i,j-1} + u_{i,j} \quad (\text{Eq. 3})$$

Other than compensation components, I control for firm and corporate governance characteristics that influence managers' aggressive non-GAAP reporting. According to Frankel et al. (2011) and Kolev et al. (2008), I control for firm characteristics such as firm size and performance. Firm size, *SIZE*, measured by the log of total assets, is associated with the cost of opportunistic behavior and the engagement in aggressive non-GAAP reporting, as shareholders are more likely to sue larger firms. Firms experiencing a loss are more likely to have higher exclusions in their non-GAAP earnings. *LOSS*, an indicator variable, is equal to one if GAAP earnings is negative, and zero otherwise. Firm performance is measured by *ROA*.

I also control for board characteristics, such as board size (*BSIZE*: total number of directors on the board) and board independence (*BINDEP*: percentage of external directors on the board). Frankel et al. (2011) find that the non-GAAP reporting is of lower quality when board independence is low. Moreover, stronger board independence constrains managerial discretion in non-GAAP measures reported (Cormier et al., 2011). I also control for CEO tenure, *TENURE*, as changes to CEO pay have been more concentrated in firms with longer CEO tenure (Correa & Lele, 2016). For ownership, I control for the effect of institutional ownership (*TOP5INSTOWN*: cumulative percentage ownership held by institutional investors holding more than 5% of firm's equity) concentrations.

I winsorize all continuous variables at one standard deviation at each tail to control for outliers.

2.4 Sample Selection and Descriptive Statistics

2.4.1 Data Sources

The data set is constructed from the largest 250 U.S. public companies, as ranked by Fortune magazine over the period from 2003 until 2017. The sample covers the period after the mandate of Regulation G that intends to control non-GAAP reporting through reconciling

disclosed non-GAAP financial measure to the most directly comparable GAAP financial measure.

The initial sample consists of Say-on-Pay data collected from Proxymonitor for the largest 250 U.S. public firms. The initial sample of firms is matched with non-GAAP data from I/B/E/S, the financial data from Compustat, CEO compensation data from Execucomp, board characteristics from BoardEx, institutional shareholders data from Thomson Reuters, and firm's stock return from Thomson Datastream for the years from 2003 until 2017. After merging all the data, the final sample with non-missing data consists of a total of 2,892 firm-year observations.

2.4.2 Descriptive Statistics

Table 2 presents the descriptive statistics of the major variables and controls used in my empirical analyses. The statistics show that around 79 percent of the considered sample report non-GAAP earnings per share. Moreover, the means of *TOTAL_EXCLUSIONS* (mean = 0.5490), *SPECIAL_ITEMS* (mean = 0.3660), and *OTHER_EXCLUSIONS* (mean = 0.1697) are positive. The positive means show that on average expenses and losses are excluded from GAAP earnings more than the exclusion of revenues and gains.

[INSERT TABLE 2 ABOUT HERE]

Table 3 reports the Pearson correlations and the Spearman correlations respectively for the dependent and independent variables used in models 1a, 2a, 1b and 2b. The lower part is the Pearson's correlation matrix, and the upper part of the table is the Spearman's correlation matrix. The correlation table shows that the likelihood of non-GAAP reporting is positively correlated to the mandatory adoption of Say-on-Pay (*SOP*) and to whether the firm is subject to a subsequent shareholder vote (*SOP_YEAR*). Moreover, the correlation table shows that the exclusion of recurring items (*OTHER_EXCLUSIONS*) is positively correlated to the mandatory adoption of Say-on-Pay (*SOP*) and to whether the firm is subject to a subsequent shareholder vote on CEO's compensation (*SOP_YEAR*).

[INSERT TABLE 3 ABOUT HERE]

Table 4 compares the means of the likelihood of non-GAAP reporting in the periods before and after the mandatory adoption of Say-on-Pay. The t-test table shows that on average

managers reported less non-GAAP earnings per share in the period before the Say-on-Pay mandate (mean = 0.72059) compared to the period post the regulation (mean = 0.83688). The difference of the means of the two subsamples is significant at the 1 percent level for the two tailed t-test.

[INSERT TABLE 4 ABOUT HERE]

Similarly, table 5 compares the means of the likelihood of non-GAAP reporting during years subject to a shareholder vote in comparison to years when a vote is not held. The t-test table shows that on average managers are more likely to report non-GAAP earnings per share when the firm is subject to a subsequent shareholder Say-on-Pay vote (mean = 0.81270) in comparison to the years when there is no Say-on-Pay vote held (mean = 0.73619). The difference of the means of the two subsamples is significant at the 1 percent level for the two tailed t-test.

[INSERT TABLE 5 ABOUT HERE]

The next section analyzes the research question in a multivariate framework to provide more reliable evidence.

2.5 Results

2.5.1 Multivariate analysis

Model (1) captures the effect of the mandatory adoption of Say-on-Pay and the effect of a voting year on the likelihood of non-GAAP disclosure. A panel data set of firms over time (annual) is used to control for any unobservable effects, with a fixed year effect to control for changes in non-GAAP reporting over time. The coefficient a_1 and a'_1 test for the effect of Say-on-Pay adoption and the impact of the firm being subject to a vote on the likelihood of non-GAAP reporting respectively. The coefficients a_1 (coefficient = 4.7435, $p < 0.01$) and a'_1 (coefficient = 0.27573, $p < 0.01$) are both positive and significant. Consistent with hypothesis H1a, the findings suggest that after the mandatory adoption of Say-on-Pay managers are more likely to report non-GAAP metrics. Moreover, consistent with hypothesis H2a, the findings suggest that managers tend to report non-GAAP earnings especially when the firm is subject to a subsequent Say-on-Pay vote.

[INSERT TABLE 6 ABOUT HERE]

Model (2) is used to determine the effect of the mandatory adoption of Say-on-Pay and the effect of the firm being subject to a vote on the quality of the reported non-GAAP metrics. The coefficients b_1 and b'_1 test for the effects of Say-on-Pay adoption and firm's subjectivity to a vote on the quality of the reported non-GAAP earnings, respectively. The coefficients b_1 (coefficient = 0.12946, $p < 0.01$) and b'_1 (coefficient = 0.09576, $p < 0.01$) are both positive and significant. Thus, the findings suggest that, after the mandatory adoption of Say-on-Pay, managers tend to exclude recurring expenses from their non-GAAP earnings, thus confirming H1b. Moreover, consistent with hypothesis H2b, managers tend to exclude recurring expenses from their non-GAAP earnings when the firm is subject to a subsequent Say-on-Pay vote.

[INSERT TABLE 7 ABOUT HERE]

2.5.2 Additional analysis

LOSS_CONVERT is another variable used to measure the quality of non-GAAP reporting (e.g. Bhattacharya et al., 2003; Bowen et al., 2005; Leung & Veenman, 2018). *LOSS_CONVERT* is an indicator variable that is equal to one when firms have a GAAP loss but a non-GAAP profit. Managers are triggered to opportunistically exclude expenses from the GAAP earnings to inflate outsiders' perceptions of firm performance, and this opportunistic motivation may increase especially in loss firms. Many studies use the conversion of a GAAP loss into a non-GAAP profit as an indicator of aggressive and low-quality non-GAAP reporting (Barth et al., 2012; Bhattacharya et al., 2003; Black & Christensen, 2009; Bowen et al., 2005).

As a new measure for non-GAAP reporting quality, I replace *OTHER_EXCLUSIONS* by *LOSS_CONVERT* in equations (1b) and (2b). Results in table 8 show that, after the adoption of Say-on-Pay, managers report an increasing value of non-GAAP earnings when the firm is experiencing a loss (coefficient = 0.40900, $p < 0.05$). Similarly, if the firm is subject to a Say-on-Pay vote, managers tend to avoid reporting a loss and inflate non-GAAP earnings instead (coefficient = 0.44357, $p < 0.05$). These results confirm my prior findings that Say-on-Pay potentially induces managers' opportunistic behavior. Managers conceal a firm's weak performance through inflated non-GAAP earnings, thus potentially misleading shareholders. However, this opportunistic reaction is significant if the firm is experiencing a financial loss and executives need to save their compensation package.

[INSERT TABLE 8 ABOUT HERE]

2.6 Conclusion

The widespread use of non-GAAP earnings in the CD&A context, without being subject to any measurement standard raises several concerns regarding the reliability of non-GAAP metrics, especially that the CD&A is the most important source used by shareholders to cast Say-on-Pay votes. Thus, this study directly addresses the concern to examine the impact of the Say-on-Pay regulation on the likelihood of non-GAAP disclosure and the quality of reported non-GAAP earnings.

An ongoing debate focuses on whether managers disclose non-GAAP earnings to inform or mislead shareholders about firm performance. Prior literature shows that compensation contracts motivate managers to opportunistically report non-GAAP metrics; however, it does not consider the impact of shareholders' involvement, such as through Say-on-Pay. Similarly, Say-on-Pay regulation has been subject to an ongoing debate on whether it acts as an effective external governance mechanism that is able to monitor and advise for an appropriate executive compensation package, or on the opposite leads to a suboptimal pay. Thus, I expect that Say-on-Pay motivates managers to opportunistically report non-GAAP earnings in order to appease shareholders of good firm performance and save their compensation package.

Consistent with the argument and based on the window-dressing hypothesis, the findings suggest that after the mandatory adoption of Say-on-Pay, managers are more likely to report non-GAAP earnings in their press releases. Moreover, managers tend to exclude recurring items from these metrics to inflate firm's performance and justify their compensation package. Shareholders also have the right to vote on the frequency of subsequent Say-on-Pay votes to be held. A vote on CEO's compensation package could be held either annually, biennially, or triennially. Thus, I find that managers are more likely to report non-GAAP earnings and disclose low-quality non-GAAP earnings when the firm is subject to a shareholder vote.

This study provides several contributions. First, it adds to the existing literature and debate on non-GAAP reporting. The findings confirm and take a side with the opportunistic use of non-GAAP reporting. This study finds that Say-on-Pay acts as an additional motivator

to the opportunistic non-GAAP reporting. It adds to other examined factors such as being constrained from engaging in earnings manipulation (Black et al., 2017b; Doyle et al., 2013), meeting targets (Bhattacharya et al., 2003; Black & Christensen, 2009; Doyle et al., 2013; Isidro & Marques, 2015), and increasing compensation contracts (Black et al., 2021; Guest et al., 2021). It also adds to the Say-on-Pay research by focusing on the “unintended” consequences of the regulation. Regulators were concerned about how mandating Say-on-Pay would be able to reduce the rise in executive compensation. However, they have overlooked that its impact can extend to financial reporting consequences, and specifically to non-GAAP reporting with an opportunistic motive.

Practically, the results provide additional support for the ethical concerns raised by non-GAAP reporting and the SEC’s efforts in regulating these metrics. This research sheds light on managers’ intentions to mislead shareholders about firm performance to gain favorable votes. Policy makers can also determine the effectiveness of Say-on-Pay as a governance mechanism. Learning from the experience of early adopters in a mandatory context, policy makers in voluntary adopting countries, such as Canada, will be able to identify the value of moving forward with mandating Say-on-Pay.

Finally, I acknowledge the limitations of this study. The study uses I/B/E/S earnings as a proxy for non-GAAP metrics. I acknowledge that I/B/E/S actual earnings is not a perfect proxy for the non-GAAP figures disclosed by managers as analysts may make adjustments to the non-GAAP numbers. However, by choosing a random subsample, I find a 90 percent overlap between the actual non-GAAP reported earnings in press releases and I/B/E/S values. Moreover, according to Bentley et al. (2018), I/B/E/S numbers underestimate managers’ aggressiveness in non-GAAP reporting. Thus, if that holds true, the I/B/E/S numbers in this study still show the aggressive behavior of managers. Yet, this limitation does not prevent this study from contributing to the non-GAAP literature. The time trend and the increasing use of non-GAAP reporting over time may affect the likelihood and quality of non-GAAP disclosure, and thus raise an endogeneity problem. However, to address this issue, year fixed effects do control for any changes affecting the disclosure and quality of non-GAAP metrics over time. Finally, I believe that the findings of this study make interesting material for future research in which researchers and policy makers can better understand the consequences of mandatory Say-on-Pay and find solutions to protect shareholders. Moreover, future research can compare if the same consequences apply in countries where Say-on-Pay is voluntary.

Chapter 3: It's not all about Pay: The influence of Compensation Committee and Non-GAAP Reporting on Say-on-Pay

Abstract

Based on the integration of agency and resource dependence theories, this study investigates if and how the quality of a firm's compensation committee and non-GAAP reporting influences shareholders' Say-on-Pay support. Compensation committee quality is an aggregate measure of compensation committee attributes that includes directors' interdependencies, their tenure, holding a CEO position, the number of seats they hold, and committee size. The sample comprises U.S. Fortune 250 firms, from 2005 until 2019. Results show that high quality compensation committees influence shareholders' support in their Say-on-Pay votes. Moreover, the quality of non-GAAP reporting is also associated with the level of shareholders' support in Say-on-Pay votes. Shareholders do not appear to be misled by low-quality non-GAAP metrics and by managers' opportunistic motive. On the contrary, shareholders appear to vote against executive compensation when these metrics are of low-quality. While policy makers have set the regulation to curb excessive executive pay through shareholders' votes, this study reveals that factors other than the excess pay itself may influence shareholders' perceptions.

Keywords: *Say-on-Pay; Executive compensation; Compensation committee quality; Non-GAAP earnings; Interdependent directors; Director tenure; CEO directors; Director shareholdings; Additional directorships; Committee size.*

3.1 Introduction

This study examines how the qualities of both firm's compensation committee and its non-GAAP reporting influence shareholders, via their Say-on-Pay votes. Say-on-Pay provides shareholders the right to express their opinion regarding executive compensation. However, from a legal perspective, shareholders vote on the Compensation Discussion & Analysis (CD&A) report issued by a firm's compensation committee of its board of directors. In most listed firms, the setting of executive compensation is the purview of the compensation committee. Hence, my premise is that the membership of a firm's compensation committee may influence how shareholders perceive, and vote upon, its executive compensation practices. Moreover, managers' non-GAAP disclosure, influenced by compensation committees' use of non-GAAP metrics as targets in executive pay, may influence shareholders in their perception of managers' performance, thus their Say-on-Pay votes.

In the 2020 proxy season, the California Public Employees' Retirement System (CalPERS) voted for the first time against 2,716 directors who were also compensation committee members of firms in which it cast a vote against the CD&A. CalPERS considers that the compensation committee members failed to fulfill their role in properly aligning executive compensation to firm performance (Jacobius, 2020). Gaps in members' human and social capital on the compensation committee may lead to a failure in designing an appropriate executive compensation package, which consequently shows in shareholders' Say-on-Pay support.

Research examining the determinants of Say-on-Pay mainly focuses on the impact of the components and structure of executive compensation on Say-on-Pay shareholder votes (e.g. Armstrong et al., 2013; Balsam et al., 2016; Brunarski et al., 2015; Kimbro & Xu, 2016). Some studies do examine the effect of board-level characteristics (Conyon, 2016; Sanchez-Marin et al., 2017). However, there is scant evidence regarding the influence of compensation committee features on shareholders' Say-on-Pay votes, even though it is the role of the compensation committee to set and to design executive's compensation package. Such studies find that shareholders, via their Say-on-Pay votes, are influenced by gender diversity in the committee and the social ties between the CEO and committee members (Alkalbani et al., 2019; Kaplan et al., 2015). While demographic diversity is important, the right skills and expertise need to be considered that can bring in diversity of thought and ideas to the

committee. For instance, a female interviewee revealed to the Harvard Business Review that she was critical of gender diversity for the sake of “tokenism”. She shared her reply during one of her board position interviews: “If you think my only value is the fact that I’m a female, I can’t add value to your board” (Creary et al., 2019). Thus, this study considers a broader set of dimensions, beyond “checking the box initiatives”, that underlie compensation committee’s ability in effectively monitoring and providing resources to the executive compensation design process. I argue that the compensation committee members’ configuration does influence shareholders in their voting support to executive compensation.

Regarding the quality of non-GAAP reporting, concerns about the influence of non-GAAP metrics on shareholders’ Say-on-Pay votes have been raised in recent years. For instance, in an op-ed in April 2019, SEC Commissioner Robert Jackson, along with Robert Pozen, a MIT senior lecturer and a former president of Fidelity Investments, one of the world’s largest asset manager, both criticized the use of non-GAAP metrics in determining executive pay. What they express as worse is that “compensation committees of almost all those companies used a non-GAAP measure as an important criterion for awarding executive pay” (Jackson & Pozen, 2019). Consequently, managers are likely to be influenced to disclose non-GAAP metrics based on the compensation committee’s use of these metrics (Black et al., 2021; Curtis et al., 2021). Since the CD&A is the main source of information used by shareholders to cast their Say-on-Pay votes, the Council of Institutional Investors (CII) also raised concern by filing a petition to the SEC on the use of non-GAAP measures to avoid any influence these metrics could play on shareholders’ Say-on-Pay decisions (Bertsch & Mahoney, 2019). The concerns are raised in light of the potential for opportunistic behavior by managers to use non-GAAP reporting to project an image of good performance. However, the SEC refused to do any adjustments to its non-GAAP regulation (Ho, 2019). Thus, it is shareholders’ responsibility to understand the purpose behind this disclosure. This study addresses this issue by examining whether shareholders can recognize the opportunistic motive underlying non-GAAP reporting and adjust their Say-on-Pay votes accordingly.

Research shows that executive compensation motivates managers to report non-GAAP metrics in an opportunistic manner, typically by excluding recurring items in their exclusions, thus leading to low-quality metrics (Curtis et al., 2021). However, some studies limit this concern as shareholders discount positive earnings surprises to opportunistic non-GAAP disclosure exclusions (Doyle et al., 2013; Guest et al., 2021). Thus, since shareholders can

realize managers' intention, I argue that the quality of non-GAAP reporting is associated with shareholders' Say-on-Pay support.

The study is conducted on a sample of Fortune 250 U.S. firms from 2005 until 2019. I follow Sun and Cahan (2009) to measure compensation committee quality. The measure is an aggregate score that represents the proportion of directors who were elected after the CEO's appointment, their board expertise, other executive roles they hold, their ownership in the firm, the number of boards they serve, and the size of the committee. The opportunistic motive of non-GAAP reporting is measured by the exclusion of recurring items from earnings. Shareholders' Say-on-Pay support is measured using two methods corresponding to the percentage of support and the classification of support on a 70% threshold.

Results show that factors other than the compensation itself may influence shareholders in their voting patterns. Compensation committees of high-quality are able to design an appropriate compensation package, thus gaining shareholders' support. However, shareholders are not deceived by managers' intention to inflate firm performance and save their compensation package. Thus, shareholders do not support compensation packages when managers opportunistically report non-GAAP metrics.

This study has both academic and practical contributions. From an academic perspective, results of this study contribute to the literature on the factors that shape shareholders' Say-on-Pay voting decisions. It advances our understanding about investors' Say-on-Pay voting decision choice. Research on compensation committee shows that the presence of social ties between the CEO and compensation committee members, as well as gender diversity in the committee, are able to influence Say-on-Pay judgements (Alkalbani et al., 2019; Kaplan et al., 2015). Gender diversity and social ties are important inclusion issues to society at all levels. However, examining these attributes alone is insufficient to cover the committee's ability to monitor and provide resources regarding the design of executive compensation package. Thus, this study suggests that a broader and richer set of variables, which represents compensation committee's effectiveness in fulfilling its two main roles, is needed to properly assess compensation committee quality and its impact on Say-on-Pay shareholder support.

This study also contributes to the corporate governance literature in different ways. First, the study extends research on the impact of compensation committee quality. While prior

research mainly focuses on the effectiveness of compensation committee quality to align compensation and firm performance, this study adds that such quality influences shareholders to provide Say-on-Pay support. For instance, in firms with a high-quality compensation committee, CEO cash compensation and stock option grants are positively associated with firm performance (Sun et al., 2009; Sun & Cahan, 2009). This study complements prior literature (e.g., Sun et al., 2009; Sun & Cahan, 2009) to find that a high-quality compensation committee indicates to shareholders a well-designed executive pay, and thus bolsters shareholders' support.

Second, Say-on-Pay literature examines the impact of governance mechanisms on shareholders' voting decisions. For instance, board independence, the separation of CEO and Chair positions and ownership control exert a positive moderating effect on the association between low Say-on-Pay support and CEO compensation alignment (Sanchez-Marin et al., 2017). Research mainly focuses on the composition of the board-at-large. However, knowing that the compensation committee is responsible for setting the CEO compensation package, not the board, its nature may be an issue. Thus, the focus is to examine how specific characteristics related to the compensation committee can have a leading role in shaping shareholders' Say-on-Pay voting decisions.

Additionally, this study adds to the non-GAAP literature that addresses the concern as to whether shareholders are misled by aggressive non-GAAP reporting. In general, the market does respond to non-GAAP metrics as a primary determinant of stock prices and a better representation of firm performance than GAAP earnings (Bhattacharya et al., 2003; Bowen et al., 2005; Bradshaw & Sloan, 2002). However, when considering specifically the response to opportunistic non-GAAP reporting, prior literature casts doubt on this notion. For instance, investors penalize firms that inflate firm performance or achieve earnings benchmarks through positive non-GAAP adjustments (Doyle et al., 2013; Guest et al., 2021; Johnson & Schwartz, 2005). Thus, this study adds that shareholders are not misled by managers' intention to inflate firm performance through non-GAAP earnings and save their compensation package.

Practically, this study helps policy makers be aware of any unrecognized factors that may influence shareholders' Say-on-Pay judgements, other than the level and structure of the compensation package. While policy makers have set the regulation to curb excessive executive pay through shareholders' votes, this study reveals that factors other than excess pay

itself may influence their perceptions. In this regard, the study suggests that investors be concerned with the committee's effectiveness when evaluating executive pay. However, the study addresses the CII's concern regarding any influence non-GAAP metrics could play on shareholders' Say-on-Pay votes. Results can assure the CII that investors are not misled by the inflation of firm performance through adjusted non-GAAP metrics.

The remainder of the paper proceeds as follows: the next section reviews the relevant literature. Section 3 explains the theories used and develops the hypotheses. Section 4 describes the research design. Section 5 details the sample selection with the descriptive statistics and section 6 discusses the empirical results. Finally, section 7 concludes the paper.

3.2 Literature Review

3.2.1 Determinants of Say-on-Pay

Say-on-Pay, first implemented in the UK in 2002, provides shareholders the right to vote on executive compensation. It has been subsequently adopted in many countries across the world in different forms, either binding or non-binding and either mandatory or voluntary. After some U.S. firms began to voluntarily adopt Say-on-Pay, the provision was signed into law in July 2010 under section 951 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank). The act requires that not less frequently than once every 3 years, a separate resolution, subject to a non-binding shareholder vote to approve the compensation of executives, be submitted in the proxy statement (The Dodd-Frank Act, 2010). The act also mandates firms to disclose a non-binding vote on the frequency of future Say-on-Pay votes, known as "Say-When-On-Pay" vote, with a choice between an annual, a biennial or a triennial frequency. Say-on-Pay has been mandated for large U.S. firms since January 2011 (and since January 2013 for issuers with a stock market capitalization of less than \$75 million).

As Say-on-Pay is a vote on executive compensation, most empirical research examines the aspects of executive compensation that lead to shareholders' disapproval. For instance, a high level of executive pay is associated with higher shareholder dissatisfaction (Balsam et al., 2016; Kimbro & Xu, 2016). Shareholders also express dissent when executives are compensated with an excess level of pay (Armstrong et al., 2013; Brunarski et al., 2015). Moreover, the composition of executive pay and its relation to firm performance affect shareholders' voting decisions. In general, shareholders tend to approve executive

compensation packages that are more sensitive to performance (Cai & Walkling, 2011; Collins et al., 2019; Krause et al., 2014).

Although Say-on-Pay is a vote on executive compensation, research shows that governance mechanisms could influence shareholders in their judgement. For instance, board size is negatively correlated to shareholder dissent (Conyon, 2016). Moreover, the effect of low shareholder support on CEO compensation is reinforced in firms with independent and non-dual boards (Sanchez-Marin et al., 2017). Shareholders tend not to support executive compensation packages of CEOs with longer tenure (Armstrong et al., 2013). While governance literature generally focuses on CEO and board-level characteristics, fewer studies examine the impact of the compensation committee on shareholders' Say-on-Pay support. In an experimental study, Kaplan et al. (2015) show that participants' approval of CEO's compensation is influenced by the social ties shared between the CEO and directors on the compensation committee and by CEO's reputation regarding financial reporting. Although it is required that compensation committee members be independent, CEOs may share strong social ties with compensation committee members which may affect their perceived independence and, therefore, shareholders' Say-on-Pay support. Moreover, the presence of more than thirty-percent female directors on the committee reduces shareholders' dissent, suggesting that women play an important role in monitoring the content of remuneration reports and help to align these reports with the interests of shareholders (Alkalbani et al., 2019).

“Tokenism” for the sake of social diversity on the board matters but ignoring directors' skills and power is of a concern. Thus, I extend the literature to examine the impact of a broader set of attributes relating to directors' skills and monitoring ability on shareholders' Say-on-Pay votes.

3.2.2 Compensation Committee Quality

A strand of literature investigates the impact of compensation committee characteristics on the alignment between executive's compensation and firm performance. For instance, Sun et al. (2009) and Sun and Cahan (2009) find that stronger ties between CEO compensation components, i.e. stock option grants and cash, and firm performance when compensation committee quality is higher. In terms of committee members' quality, these studies measure quality based on an aggregate score for six attributes: Interdependent directors, Director tenure, CEO directors, Director shareholdings, Additional directorships, and Committee size. Each of

these attributes plays a significant role in enhancing or reducing the quality and effectiveness of the committee.

Directors are elected to office by firm's shareholders to whom directors are accountable and must act in the best interests of the company. Although publicly traded corporations must appoint a compensation committee comprised solely of independent directors, CEOs are commonly consulted on director nomination decisions which renders committees sympathetic to CEOs. These directors appointed during the tenure of an incumbent CEO are termed "interdependent" directors (Daily et al., 1998). Thus, interdependent directors may feel a sense of loyalty to the CEO which reduces their monitoring effectiveness and increases the CEO horizon problem (Liu, 2020). Interdependent directors on the compensation committee approve higher levels of CEO compensation that are not connected to firm performance (Lambert et al., 1993; Main et al., 1995; Sun et al., 2009). In other words, the presence of interdependent directors reduces the quality of the compensation committee.

Additionally, there are two conflicting viewpoints regarding the impact of long-tenured directors as a quality attribute (Byrd et al., 2010; Vafeas, 2003). According to the CEO allegiance hypothesis, longer director tenure leads to entrenchment and familiarity with the CEO. Thus, directors give up on their monitoring activities towards managers. Consistent with the CEO allegiance hypothesis, the presence of long-tenured directors, with twenty or more years of board service, is associated with higher CEO pay (Vafeas, 2003). On the other hand, the expertise hypothesis suggests that directors gain firm-specific and industry-specific information as their board service increases which enhances their monitoring and advising effectiveness. Clements et al. (2018) integrate both perspectives to conclude that directors' effectiveness dominates in their early years of tenure while the consequences of entrenchment prevail in later years. Similarly, Brown et al. (2017) find that the prime tenure period of directors is between 7 and 18 years during which they are more likely capable of aligning CEO compensation to firm performance.

Third, directors who are CEOs of other firms are the most desired board members which is evident by higher positive stock price reactions to their appointment (Fich, 2005). Despite the apparent attractiveness, their presence is not without costs. When CEO directors serve on the compensation committee, they may feel sympathetic to each other and will bias their decisions to support their fellow CEO (Sun & Cahan, 2009). CEOs are thus paid higher with a

lower sensitivity to firm performance (Faleye, 2011; Li & Qian, 2011). Thus, the presence of CEO directors may lower the quality of the compensation committee.

Board members who hold ownership in the firm share same interests with those of outside shareholders (Friday & Sirmans, 1998). Thus, directors with high stock ownership have stronger incentives to monitor the CEO (Shivdasani & Yermack, 1999). This monitoring influence may limit the compensation paid to CEOs and enhance the quality of the compensation committee. However, Sun and Cahan (2009) find no significant effect of director shareholdings on the compensation committee on the alignment between executive compensation and firm performance.

Another quality attribute worth considering is the appointment of directors with multiple board seats. Conflicting perspectives exist regarding the effectiveness of directors holding several board seats and the benefits they can bring to the board. Positively, investors value the presence of busy directors on the board, suggesting that these directors can provide resources to the firm through their experience and reputational capital (Ferris et al., 2003). On the other hand, board members with several directorships have less dedicated time to fulfill their tasks and to effectively monitor managers. Thus, the presence of busy directors is associated with an increased likelihood of financial fraud (Beasley, 1996), excessive CEO compensation (Core et al., 1999) and fewer executive compensation disclosure (Laksmana, 2008). Thus, while busy directors may enhance the quality of compensation committee through sharing their expertise for an optimal pay, they may reduce the quality by the lack of effective monitoring.

Finally, there is no consensus regarding the appropriate committee size for a better quality. Supporters of large boards argue that board size is associated with higher levels of firm performance (Belkhir, 2009). From a resource dependence perspective, board size is used as a proxy for board's resource provision effectiveness since large boards embrace directors from various backgrounds and expertise (de Villiers et al., 2011). Agency theorists also confirm that larger boards are more likely to be independent and can exercise better monitoring capabilities. Thus, managerial capacity to misreport financial information and to manage earnings decreases with larger boards and committees (Saona et al., 2020; Yang & Krishnan, 2005). However, coordination issues may arise in large boards. Smaller boards can implement decisions more dynamically and timely (Forbes & Milliken, 1999). Sun and Cahan (2009) favor smaller

compensation committees for better quality. They show that the association between CEO cash compensation and accounting earnings is lower in firms with larger compensation committees with marginal significance.

Aggregating these six attributes of compensation committee, prior literature confirms the influence of these attributes on the quality of compensation committee. For instance, Sun and Cahan (2009) find that CEO cash compensation is more positively associated with accounting earnings when firms have high compensation committee quality consisting of these six attributes. Similarly, future firm performance is more positively associated with stock option grants in firms of high-quality compensation committees (Sun et al., 2009). Moreover, compensation committee quality is positively associated with the voluntary adoption of clawback provisions that is used as a governance mechanism to deter CEOs from publishing misstated accounting information (Hsu et al., 2018). Thus, the literature confirms that compensation committees of high quality are better monitors and resource providers to align executive compensation and firm performance. These committees are characterized with superior human and social capital to design an optimal executive pay. While shareholders are required to provide their vote regarding the executive compensation, they may consider the compensation committee characteristics. To answer such a concern, I extend the literature to investigate the influence of the compensation committee quality, consisting of these six attributes, on shareholders' Say-on-Pay votes.

3.2.3 Non-GAAP Reporting

The higher the skills and expertise of directors on the compensation committee are, the better is the design of the executive compensation. However, what is common among their design practice is the use of non-GAAP metrics as a criterion for awarding executive pay. According to Audit Analytics, more than two-thirds of the S&P 500 companies in 2018 used non-GAAP metrics to establish executive compensation targets (Usvyatsky, 2019). The use of non-GAAP as a compensation target triggers managers to disclose non-GAAP performance metrics (Black et al., 2021; Curtis et al., 2021). Non-GAAP metrics are customized performance measures voluntarily disclosed by managers in firms' press releases.

There is an ongoing debate on the purpose of managers' non-GAAP disclosure. Managers claim that non-GAAP metrics intend to inform investors about the core operations of the company that GAAP earnings alone could not explain. Thus, they would exclude non-

recurring items (i.e., one-time gains or one-time expenses), referred to as special items, that are deemed to be uninformative to represent firms' core earnings. Consistent with this motivation, prior literature shows that non-GAAP operating income has greater information content than GAAP earnings and better represent firm's core operations (Bhattacharya et al., 2003; Brown & Sivakumar, 2003; Lougee & Marquardt, 2004). For instance, Bansal et al. (2013) show that non-GAAP metrics accurately portray a firm's financial health. Cormier et al. (2017) show that a non-GAAP measure of EBITDA enhances the association between earnings and stock price. However, as these measures are unaudited, managers have full discretion in inflating investors' perceptions of firm's core operations. Thus, managers have the intention to opportunistically exclude recurring items beyond a one-time gain or loss to increase firm's income and conceal weak performance, resulting in low-quality non-GAAP metrics. Prior research shows that the majority of reported non-GAAP earnings exceed their comparable GAAP earnings which provides evidence on the inflation of firm performance (Aubert, 2009; Webber et al., 2013). Moreover, non-GAAP reporting is also used as a substitute to earnings manipulation (Black et al., 2017b; Cormier et al., 2011; Doyle et al., 2013).

One of the main drivers of the opportunistic non-GAAP reporting is executive compensation. As compensation committees have increased the use of non-GAAP metrics as a compensation target, CEOs take advantage of their discretion in exclusion choices and opportunistically exclude expenses and non-transitory losses to inflate earnings, and thus their compensation (Curtis et al., 2021). For instance, managers with higher in-the-money stock options are more likely to report non-GAAP metrics (Cormier et al., 2011). The CII petition expressed concern regarding managerial incentive-based motivation for opportunistic non-GAAP reporting that may mislead shareholders in their Say-on-Pay votes. However, the SEC declined any amendment to its non-GAAP regulation. Thus, this study addresses this concern to examine whether shareholders are misled by opportunistic non-GAAP reporting, via their Say-on-Pay votes.

In this regard, prior literature investigates shareholders' reaction to non-GAAP metrics. Early literature investigating the impact of non-GAAP metrics, in general, find that these adjusted metrics are considered more informative about firm's core operations and more permanent than GAAP operating earnings (Bhattacharya et al., 2003). Managers take a proactive role in defining and emphasizing non-GAAP metrics while conveying performance

to analysts and shareholders. Thus, market participants respond to these metrics as a primary determinant of stock prices relative to GAAP earnings (Bradshaw & Sloan, 2002).

However, when considering specifically the market response to opportunistic non-GAAP reporting, prior literature casts doubt on shareholders' appreciation of these metrics. For instance, when managers opportunistically exclude recurring expenses to meet or beat analyst expectations, shareholders discount the corresponding positive earnings surprises (Doyle et al., 2013). Also, these earnings do not correlate any better with security returns than GAAP earnings (Guest et al., 2021). Thus, the limited literature allays the concern that opportunistic non-GAAP earnings may mislead shareholders. Thus, I further address this concern by investigating the influence of opportunistic non-GAAP reporting on shareholders, via their Say-on-Pay votes.

3.3 Theories and Hypothesis Development

The compensation committee is expected to design an executive compensation package that attracts, retains, and motivates executives to achieve firm's objectives. While such a responsibility seems direct and simple, compensation committee directors are the least envied and hold the most difficult role on the board. One reason is that directors find themselves facing a challenge to balance between the conflicting needs of shareholders and managers (Reda et al., 2014).

On one side, boards and its committees have a fiduciary responsibility to shareholders. This focus on conducting due diligence ties in with agency theory, which requires that the board and its committees provide substantial and independent monitoring of management. With the separation of ownership and control between managers and shareholders, along with conflicting interests, monitoring is required to ensure that managers do not act opportunistically in favor of their own interests (Jensen & Meckling, 1976). Within their remit, compensation committees should design an unexcessive executive compensation that aligns with performance and is accepted by shareholders. On the other side, to attract and retain talented executives to implement corporate strategy, compensation committees fear the risk of being unfair and paying too little to managers compared to the market (Hermanson et al., 2012). In this regard, resource dependence theory views board and committee members as partners of management. With sufficient knowledge and expertise, directors' role is to provide critical resources to management, including legitimacy, advice, and counsel (Hillman & Dalziel,

2003). Thus, the emphasis in resource dependence theory would be on directors' human capital, such as industry expertise, knowledge, reputation, and skills (Hillman & Dalziel, 2003). Thus, to retain talented managers with superior operating results, while at the same time reducing compensation cost to shareholders, directors on the compensation committee need to have superior attributes and skills to cope with the issue.

Hermanson et al. (2012) interview directors who serve on compensation committees. Consistent with an agency perspective, interviewed directors emphasize their independence and expertise in executing their duties such as oversight and in designing an optimal executive package while protecting shareholders. They discuss their real independence and their ability to say "NO" to managers. Moreover, as resource providers, the compensation committee members highlight their competence, their relevant expertise, and their ability to develop and retain executive talent with fair compensation. These responses are aligned with the findings of empirical research that revolves around compensation committee attributes. For instance, high-quality compensation committees design executive compensation contracts capable of motivating managers to make optimal decisions for better firm performance while reducing agency problems (Sun et al., 2009; Sun & Cahan, 2009).

With qualified directors, compensation committees can take the right compensation decisions. Otherwise, Reda et al. (2014) fear that bad compensation designs may be severe leading to shareholder revolts. In the Say-on-Pay context, shareholders' Say-on-Pay voting right is one form and opportunity for shareholders to express their dissent and revolt against executive pay issues. If compensation committees do have the skills to design an appropriate executive compensation, I expect that shareholders may support the compensation package through Say-on-Pay. Thus, the first hypothesis assumes the following:

Hypothesis 1: Shareholders' Say-on-Pay votes are positively associated with compensation committee quality.

Besides the need for compensation committee to design an optimal executive compensation package that reduces agency costs, agency theory supports the use of disclosure to minimize information asymmetry between shareholders and managers (Jensen & Meckling, 1976). With voluntary disclosure, managers provide additional information to reduce information asymmetry and reduce agency costs (Barako et al., 2006; Shehata, 2014). While managers have discretion in disclosing the information suitable for their benefit, the agency

theory favors specifically informative, rather than opportunistic, disclosures. Hadley (2017) considers one form of disclosure, which is the disclosure of alternative pay measures, to compare the impact of informative versus opportunistic disclosure on shareholders, through their Say-on-Pay votes. The study finds that firms report alternative pay measures, such as “pocketed” pay for opportunistic purpose and “peer comparison” measures for informative purpose. However, the growth in shareholders’ Say-on-Pay support is most pronounced to “peer comparison” reporting which improves informativeness and comparability in financial reporting across firms, compared to “pocketed” pay. Moreover, shareholders’ support is associated with the tone and prominence of the CD&A (Balsam et al., 2016). Shareholders tend to vote negatively when the compensation disclosure is difficult to read, understand and with a negative tone. Shareholders also discount positive earnings surprises arising from managers’ opportunistic exclusion of recurring expenses (Doyle et al., 2013). This suggests that shareholders can differentiate between managers’ intention to inform or deceive shareholders. In this regard, since managers opportunistically disclose non-GAAP metrics to conceal weak performance in favor of their compensation package, this study assumes that shareholders can realize managers’ intention. Thus, the second hypothesis assumes the following:

Hypothesis 2: Shareholders’ Say-on-Pay votes are positively associated with non-GAAP reporting quality.

3.4 Empirical Model

3.4.1 Model

To determine the influence of the compensation committee quality on shareholders’ Say-on-Pay support as developed in the first hypothesis, I develop the following model:

$$SUPPORT_{i,j+1} = f(a_0 + a_1CCQ_{i,j} + a_2EXCESSCOMP_{i,j} + a_3TCOMP_{i,j} + a_4ROA_{i,j} + a_5LOSS_{i,j} + a_6TSR_{i,j} + a_7SIZE_{i,j} + a_8BSIZE_{i,j} + a_9BINDEP_{i,j} + a_{10}TENURE_{i,j} + e_{i,j}) \quad (Eq. 1)$$

If shareholders are influenced by the quality of the compensation committee and appreciate that a high-quality committee can design an appropriate executive pay, I expect that shareholders provide support through their Say-on-Pay votes. Thus, I expect a positive a_1 estimate.

For hypothesis (2), I examine the impact of the quality of non-GAAP reporting on shareholders' Say-on-Pay votes. Thus, I develop the second model:

$$SUPPORT_{i,j+1} = f(b_0 + b_1OTHER_EXCLUSIONS_{i,j} + b_2EXCESSCOMP_{i,j} + b_3TCOMP_{i,j} + b_4TSR_{i,j} + b_5SIZE_{i,j} + b_6BSIZE_{i,j} + b_7BINDEP_{i,j} + b_8TENURE_{i,j} + e_{i,j}) \quad (Eq. 2)$$

If shareholders are able to realize managers' intention to opportunistically disclose non-GAAP metrics, and exclude recurring items, to conceal weak performance, I expect that shareholders do not support the executive compensation with low-quality non-GAAP reporting. Thus, I expect a negative b_1 estimate.

3.4.2 Measures for Say-on-Pay Votes

I identify **SUPPORT** as the support rate of shareholders' vote defined as the natural log of the percentage of votes approving executive compensation relative to the total number of votes, collected from Proxy Monitor.

3.4.3 Measures for Compensation Committee Quality

To measure compensation committee quality, I use a broad set of variables related to the structure and composition of the compensation committee, following Sun et al. (2009) and Sun and Cahan (2009). The variables chosen cover directors' social and human capital that allow compensation committee directors to effectively design an appropriate pay, instead of focusing only on diversity matters that just prevent social criticism. Thus, the constructed multidimensional measure of compensation committee quality aggregates six potential, individual measures including: interdependent directors, director tenure, CEO directors, director shareholdings, additional directorships, and committee size. Interdependent directors (*INTERDEPENDENT*) corresponds to the proportion of directors on the compensation committee appointed during the tenure of an incumbent CEO. Director tenure (*DTENURE*) represents the proportion of committee members with 10 or more years of board service time. CEO Directors (*CEO_DIR*) is measured by the proportion of directors who are CEOs of other firms at the same time. Director Shareholdings (*DSHARES*) represents the percentage of shares held by directors on the compensation committee. Additional Directorships (*DIRECTORSHIPS*) is the proportion of directors who serve on three or more boards. Finally, the size of the committee (*CC_SIZE*) is measured by the number of directors holding seats on

the compensation committee. These compensation committee variables are collected from BoardEx.

The impact of each of these measures on the quality of the compensation committee is undetermined. While the existence of some variables may enhance the quality, others may deter its competence. Moreover, prior research does not investigate the impact of these variables on shareholders' Say-on-Pay support. Thus, to determine the directional impact of each of the six attributes on shareholders' support, I first estimate Equation (1) for each individual measure independently. Second, for each individual measure, I define a quality score that is coded "1" if the firm's value of that measure is greater (less) than its median where the individual measure increases (decreases) governance quality, and "0" otherwise. The aggregate measure is the sum of the quality scores of the individual measures for the firm where a higher sum represents a more effective compensation committee.

3.4.4 Measures for non-GAAP Reporting Quality

Non-GAAP reporting quality represents the degree to which the non-GAAP metrics exclude a recurring item. Non-GAAP earnings are considered of "high-quality" if the measure represents the core earnings of the company when managers only exclude non-recurring items. However, if managers exclude recurring items in order to mislead shareholders about firm performance, non-GAAP earnings are considered to be of "low-quality" (Kolev et al., 2008; Kyung et al., 2019). Thus, non-GAAP earnings quality, *OTHER_EXCLUSIONS*, is measured by the exclusion of recurring items following prior literature (Doyle et al., 2003, 2013; Kolev et al., 2008). *OTHER_EXCLUSIONS* is the difference between total non-GAAP exclusions and special items. Total non-GAAP exclusions, *TOTAL_EXCLUSIONS*, is calculated as the difference between non-GAAP earnings per share and GAAP earnings per share. I transform all variables to a basic per share basis by multiplying the variables by the ratio of basic earnings per share to diluted earnings per share, both before extraordinary items (Compustat #19/#9), or by the dilution factor provided by I/B/E/S if item #9 or item #19 is missing or zero. With all variables on the same per share basis, I decompose total non-GAAP exclusions into special items (non-recurring items) and other exclusions (recurring items). *SPECIAL_ITEMS* is defined as the difference between earnings per share from operations (Compustat #177) and GAAP earnings per share.

3.4.5 Control Variables

As Say-on-Pay allows shareholders to vote on executive compensation, I control for different pay measures. I control for total compensation, *TCOMP* (Kimbrow & Xu, 2016) and excess compensation, *EXCESSCOMP* (Balsam et al., 2016; Cai & Walkling, 2011). Compensation data is collected from Execucomp.

Consistent with the model developed by Core et al. (2008), excess compensation is estimated as the difference between the compensation actually paid to the CEO and the expected compensation (Alissa, 2015; Brunarski et al., 2015; Hadley, 2017). The excess compensation refers to the error term ($u_{i,t}$) from the below pooled cross-sectional OLS regression of the natural logarithm of executive compensation on proxies of firm economic determinants (Eq. 3):

$$TCOMP_{i,j} = \beta_0 + \beta_1 * TENURE_{i,j} + \beta_2 * RETURN_{i,j} + \beta_3 * RETURN_{i,j-1} + \beta_4 * SALES_{i,j-1} + \beta_5 * BTM_{i,j-1} + \beta_6 * ROA_{i,j} + \beta_7 * ROA_{i,j-1} + u_{i,j} \quad (Eq. 3)$$

I also control for firm and governance variables that influence shareholders' Say-on-Pay voting decision. Primarily, better firm performance is associated with lower shareholder dissatisfaction against executive compensation (Balsam et al., 2016; Cullinan et al., 2017). Financial performance is measured by return on assets (*ROA*), an indicator if the firm is experiencing a loss (*LOSS*) and total shareholder return (*TSR*). Larger firms are more likely to be sued by shareholders who would express higher dissatisfaction and are subject to a higher cost if they engage in opportunistic activities (Ferri & Maber, 2013; Frankel et al., 2011; Kolev et al., 2008). Thus, I control for firm size (*SIZE*), measured by total assets. I also control for general board characteristics, such as board size (*BSIZE*) and board independence (*BINDEP*) since board attributes are positively associated with shareholders' Say-on-Pay support (Cullinan et al., 2017; Ferri & Maber, 2013). I also control for CEO tenure (*TENURE*) as changes to CEO pay have been more concentrated in firms with longer CEO tenure following Say-on-Pay laws (Correa & Lel, 2016).

3.5 Sample Selection and Descriptive Statistics

3.5.1 Data Sources

The data set is constructed from the largest 250 U.S. public firms, as ranked by Fortune magazine over the period from 2005 until 2019. The initial sample consists of Say-on-Pay data collected from Proxymonitor for the largest 250 U.S. public firms. The sample of firms is matched with compensation committee characteristics from BoardEx, non-GAAP data from I/B/E/S, financial data from Compustat, executive compensation data from Execucomp, and firm's stock return from Thomson Datastream. After merging all the data, the final sample with non-missing data consists of a total of 2,221 firm-year observations.

3.5.2 Descriptive Statistics

Primarily, I identify the impact of each of the six attributes of the compensation committee on Say-on-Pay support. Table 9 represents the direction of the relation between each attribute and Say-on-Pay support, while controlling for measures of firm performance, executive compensation, board attributes and industry-effects. The compensation committee attributes are significantly associated with shareholders' support, except for the proportion of directors' shareholding (coefficient = -0.00097, $p > 0.10$). This is consistent with the findings of Sun and Cahan (2009) that do not find a significant impact of committee directors' ownership on the alignment between CEO cash compensation and accounting earnings. Thus, based on the results, I exclude director shareholdings from the aggregate score of compensation committee quality.

Regarding the remaining attributes, I find that shareholders provide support to executive compensation for committees with a higher proportion of experienced directors of 10 or more years (coefficient = 0.08254, $p < 0.01$). However, shareholders' Say-on-Pay votes are negatively associated with compensation committees with a higher proportion of interdependent directors (coefficient = -0.07058, $p < 0.01$), directors sitting at 3 or more board seats (coefficient = -0.07254, $p < 0.05$), and directors who are CEOs of another firm (coefficient = -0.19077, $p < 0.01$). Similarly, large compensation committees are negatively associated with a lower support rate (coefficient = -0.01154, $p < 0.05$).

In other words, interdependent directors and those who are CEOs of other firms are considered loyal and feel with the incumbent CEO; thus, they are not favored by shareholders as to have higher governance quality. Also, directors with 3 or more board seats are considered busy and do not have enough time to monitor the CEO and to design an appropriate compensation package. However, shareholders trust directors with long experience of board service, consistent with the argument that CEO directors may bring to the compensation committee their experience and expertise, thus improving governance quality.

[INSERT TABLE 9 ABOUT HERE]

After identifying the directional impact and the significance of each of the individual measures on the percentage of shareholders' support, I convert these measures to binary measures. The binary measure has a value "1" if the firm's value of that measure is greater (less) than its median where the individual measure increases (decreases) governance quality, and "0" otherwise. For instance, binary 1 is given to the measure with the proportion of directors' experience greater than the median, and 0 if lower than the median. For the other four significant variables, the variable takes a binary 1 if the value is lower than the median, and 0 otherwise. Then, I calculate the aggregate compensation committee quality score, *CCQ*. This score is the sum of the quality scores of the five binary measures.

Table 10 represents the descriptive statistics of the main variables used in the regressions that include Say-on-Pay support, the six individual attributes and aggregate score of compensation committee quality, the exclusion of recurring items in non-GAAP earnings, and control variables. The sample consists of 2,221 observations. The table shows that on average firms received 86-percent support for Say-on-Pay. Also, the compensation committee quality of the boards of these firms in the sample has a score of around 2.5 of 5 high-quality measures. Regarding the compensation committee attributes, around 40-percent of the committee directors are appointed during the tenure of the incumbent CEO. On average, 44-percent of the directors on the compensation committee are long-tenured directors with more than 10 years of board service. While a lower number of directors on the committee hold CEO positions in another firm (19-percent), the majority of compensation committee directors sit on 3 or more board seats (67-percent). Finally, the average committee size is 5 directors.

The positive average of *OTHER_EXCLUSIONS* (mean = 0.1685) shows that managers are motivated to exclude recurring expenses and losses, rather than income-decreasing items.

While most firms in the sample face low return (mean = 0.0589), CEOs are compensation in excess of the economic determinant compensation (mean = 0.0989). Moreover, these CEOs on average serve for 7.5 years in their position.

[INSERT TABLE 10 ABOUT HERE]

Table 11 reports the Pearson correlations and the Spearman correlations respectively for the dependent, independent and control variables used in models 1 and 2. The lower part is the Pearson's correlation matrix, and the upper part of the table is the Spearman's correlation matrix. The correlation table shows that the compensation committee quality (*CCQ*) is positively correlated to the support provided by shareholders to Say-on-Pay (*SUPPORT*). Also, the exclusion of recurring items (*OTHER_EXCLUSIONS*), which represents a low-quality non-GAAP metrics, is negatively correlated to Say-on-Pay support (*SUPPORT*).

[INSERT TABLE 11 ABOUT HERE]

3.6 Results

3.6.1 Multivariate analysis

Results of table 12 (Model 1) show that the quality of the compensation committee significantly impacts shareholders' Say-on-Pay support. The coefficient a_1 tests for the effect of the aggregate score of compensation committee quality on shareholders' Say-on-Pay support. The coefficient a_1 (coefficient = 0.02973, $p < 0.01$) is positive and significant. Consistent with hypothesis H1, the findings suggest that compensation committees that can provide high governance impact through significant human and social capital influence shareholders to provide support to the executive compensation package. Moreover, results reveal that when shareholders vote against executive compensation, they consider the excess compensation, *EXCESSCOMP*, that is not explained by firm's economic determinants (coefficient = -0.0525, $p < 0.01$). Regarding firm performance, shareholders are concerned with their own return. Thus, total shareholder return, *TSR*, is positively and significantly associated with support (coefficient = 0.06648, $p < 0.01$). Consistent with prior literature, large firms, *SIZE*, are subject to higher scrutiny and shareholder dissatisfaction (coefficient = -0.03287, $p < 0.01$).

[INSERT TABLE 12 ABOUT HERE]

Results of table 13 (Model 1) indicate that the quality of non-GAAP reporting also influences shareholders' Say-on-Pay support. The coefficient b_1 tests for the effect of the exclusion of recurring items in non-GAAP earnings on shareholders' Say-on-Pay support. The coefficient b_1 (coefficient = -0.01247, $p < 0.10$) is negative and significant. The exclusion of recurring items suggests that managers intend to opportunistically disclose non-GAAP metrics and the financial non-GAAP reporting is low in quality. Consistent with hypothesis H2, shareholders differentiate managers' intention to conceal weak firm performance and save their compensation package.

[INSERT TABLE 13 ABOUT HERE]

3.6.2 Additional analysis

3.6.2.1 High versus Low Say-on-Pay Support

I examine the hypotheses H1 and H2 using a different measure for the support rate of Say-on-Pay. The measure classifies firms into those receiving a high support rate of more than 70 percent (*HIGH_SUPPORT*) (Brunarski et al., 2015; Ferri & Oesch, 2016; Hadley, 2017). I consider 70 percent as the support rate threshold because ISS issues a negative Say-on-Pay recommendation, and votes against or withholds from the members of the Compensation Committee, if the board fails to adequately respond to a prior Say-on-Pay vote of less than 70 percent support.

As a new measure for Say-on-Pay support, I replace *SUPPORT* measure by *HIGH_SUPPORT* measure in equations (1) and (2). Results in tables 12 (Model 2) and 13 (Model 2) confirm my prior findings that the quality of each of the compensation committee (coefficient = 0.04185, $p < 0.01$) and non-GAAP reporting (coefficient = -0.01737, $p < 0.10$) influence Say-on-Pay support. These qualities can influence shareholders in their voting decision to the extent that the vote becomes characterized as a high vote in the presence of governance abilities and non-opportunistic reporting.

[INSERT TABLES 12 AND 13 ABOUT HERE]

3.6.2.2 Principal Component Analysis for Compensation Committee Quality

Compensation committee quality is an aggregate measure of the significant attributes of the compensation committee. As another measure for the overall quality of the compensation committee, this study employs the principal component analysis (PCA). With multiple dimensions of governance attributes, the PCA builds a comprehensive evaluation component of the compensation committee's governance quality.

Using the first component of the PCA (CCQ_2), I replace CCQ measure by CCQ_2 in Eq. (1). Results in table 14 align with my prior findings. The overall governance quality of the compensation committee positively influences shareholders' Say-on-Pay support. The results are robust to both measures of Say-on-Pay support, $SUPPORT$ (coefficient = 0.01574, $p < 0.01$) and $HIGH_SUPPORT$ (coefficient = 0.01161, $p < 0.10$).

[INSERT TABLE 14 ABOUT HERE]

3.6.2.3 Endogeneity for Compensation Committee Quality

The governance quality of the compensation committee may not be an exogenous variable. The committee characteristics may be affected by CEO compensation, as well as firm performance. To address issues of potential endogeneity, I use a two-stage regression approach similar to the procedure used by Sun et al. (2009) and Sun and Cahan (2009). I use a set of additional determinants as instrumental variables, such as CEO's influence and firm growth opportunities, which may affect the demand for a high-quality compensation committee. Also, I include the control variables of the main regression. Thus, the first stage regression model is as follows:

$$CCQ_{ij} = f(c_0 + c_1CEOOWN_{ij} + c_2TENURE_{ij} + c_3INSTOWN_{ij} + c_4lnMB_{ij} + c_5SIZE_{ij} + c_6CCQRANK_{ij} + c_7EXCESSCOMP_{ij} + c_8TCOMP_{ij} + c_9ROA_{ij} + c_{10}LOSS_{ij} + c_{11}TSR_{ij} + c_{12}BSIZE_{ij} + c_{13}BINDEP_{ij} + e_{ij}) \quad (Eq. 4)$$

CEO ownership ($CEOOWN$) and CEO tenure ($TENURE$) are included because board governance quality is weaker in firms with high CEO influence (Baker & Gompers, 2003). CEO ownership is measured by the percentage of shares owned by the CEO. CEO tenure is measured by the log of the number of years the CEO has been in office. Moreover, institutional ownership improves board's and committees' governance monitoring (Alshabibi, 2021). Thus,

I include *INSTOWN* measured by the percentage of shares owned by institutional investors. To control for firm performance, I include *lnMB* and *SIZE* as measures of firm performance and firm size. I add *CCQRANK* to the model because endogeneity is likely to affect the variation in the quality of the compensation committee, rather than the level of *CCQ* (Hentschel & Kothari, 2001; Sun et al., 2009; Sun & Cahan, 2009). When sorting *CCQ*, *CCQRANK* takes a value of 0 if *CCQ* is equal to 0. *CCQRANK* is equal to 1 if *CCQ* measure is below the median, and 2 if *CCQ* measure is above the median.

In the second stage regression model (Eq. 5), *CCQ'* is the fitted value from the first stage regression (Eq. 4).

$$SUPPORT_{i,j+1} = f(a_0 + a_1CCQ'_{i,j} + a_2EXCESSCOMP_{i,j} + a_3TCOMP_{i,j} + a_4ROA_{i,j} + a_5LOSS_{i,j} + a_6TSR_{i,j} + a_7SIZE_{i,j} + a_8BSIZE_{i,j} + a_9BINDEP_{i,j} + a_{10}TENURE_{i,j} + e_{i,j}) \quad (Eq. 5)$$

Table 15 provides the results of hypothesis 1 after controlling for the potential endogeneity of compensation committee quality. Results of the second stage regression show that the coefficient on the compensation committee quality *CCQ'* is still positive and significant (coefficient = 0.0248, $p < 0.01$). This supports hypothesis 1 that the compensation committee quality is positively associated with shareholders' Say-on-Pay support after controlling for the endogeneity issue.

[INSERT TABLE 15 ABOUT HERE]

3.7 Conclusion

Say-on-Pay, in its simplest form, is a governance mechanism that allows shareholders to approve the compensation package for a firm's executive officers. Although it is the components and structure of the compensation package that shape shareholders' Say-on-Pay votes, other unapparent determinants may influence the voting decision. This study examines how the quality of both firm's compensation committee and its non-GAAP reporting influence shareholders, via their Say-on-Pay votes. Shareholders support executive compensation when the compensation committee is of high-quality. On the other hand, shareholders vote against this compensation package if managers intend to mislead shareholders of firm performance and report low-quality non-GAAP metrics.

This study provides several contributions. Academically, results of this study add to the literature in several areas. First, it adds to the literature on the determinants of Say-on-Pay. Extant research investigates how the compensation package influences shareholders in their voting decisions. However, this study considers the influence of factors other than the compensation package, such as the compensation committee and non-GAAP reporting, on Say-on-Pay. The study also contributes to the corporate governance literature through examining compensation committee attributes, where high-quality committees design appropriate executive pay and influence shareholders' decisions. From a financial reporting perspective, results also add to the non-GAAP literature that addresses the huge concern on whether shareholders are misled by aggressive non-GAAP reporting. This study confirms that shareholders are not misled by managers' intentions.

Practically, this study directly addresses CII and SEC's concerns regarding the extent to which shareholders are influenced by managers' opportunistic intention towards non-GAAP reporting. The findings can assure policy makers and investors' associations that shareholders are able to understand managers' intentions behind non-GAAP disclosure. Thus, shareholders are not misled by these metrics if they are inflating firm performance. Moreover, policy makers can identify unrecognized factors, such as the qualities of compensation committee and non-GAAP reporting, that may influence shareholders' Say-on-Pay judgements. The main purpose of Say-on-Pay is to curb excessive executive compensation, this study reveals that factors other than excess pay itself may influence their perceptions.

Finally, I acknowledge the limitations of this study. First, following Sun et al. (2009) and Sun and Cahan (2009), this study relies on a set of six attributes that are considered sufficient to assess the quality of the compensation committee. Future research could extend the literature to examine other attributes that may have an influence on committee's efficiency. For instance, future research can investigate the influence of the meeting frequency and attendance rate on Say-on-Pay as these variables are indicators of the committee's monitoring power (Hahn & Lasfer, 2016). Secondly, this study focuses on the compensation committee in particular. However, future research can consider the effectiveness of the board, as a whole, on Say-on-Pay. It is the responsibility of the compensation committee to determine the executive compensation plan. However, the committee also recommends the plan to the board of directors for determination. Thus, future research can examine whether the impact of the six attributes on Say-on-Pay differs when considering the board in general.

Chapter 4: The Dual Role of Say-on-Pay: Determinant and Consequence

Abstract

Within the realm of corporate governance research, research on Say-on-Pay is fairly recent, dating back a little more than a decade. In this study, I synthesize research on Say-on-Pay and classifies it into two categories that revolve around the determinants and consequences of Say-on-Pay. I then develop a conceptual model that represents two closed interconnections. The first connection is between Say-on-Pay and compensation committees. Shareholders support Say-on-Pay when compensation committee quality is high. However, when shareholders vote against executive compensation within the context of Say-on-Pay, they also vote against the re-election of compensation committee members. The second connection of the model is between Say-on-Pay and non-GAAP reporting. The introduction of Say-on-Pay motivates managers to engage in opportunistic non-GAAP metrics reporting. However, reporting of low-quality non-GAAP metrics tends to lead shareholders to provide negative Say-on-Pay votes. Thus, Say-on-Pay holds simultaneously a dual role as a determinant and consequence in its relation to compensation committee and non-GAAP reporting.

Keywords: *Say-on-Pay; Executive compensation; Non-GAAP earnings; Compensation committee quality.*

4.1 Introduction

The United Kingdom (U.K.) was the forerunner in mandating Say-on-Pay as early as 2002. Simply stated, Say-on-Pay requires that shareholders vote on executive compensation. Since its first adoption, Say-on-Pay has been spreading throughout the world in different forms. While some countries have mandated its practice of the regulation, others have left it to the discretion of companies to hold a vote. Moreover, in some countries the vote is non-binding, or advisory, while in other countries it is binding, and boards must take action in response to a negative vote.

The academic literature on Say-on-Pay is thus recent. However, despite its relative short life, the effect of Say-on-Pay on executive compensation has generated considerable debate. Supporters argue that it acts as an external monitoring mechanism that pressures the board to reduce CEO pay. Board members do respond to shareholders' dissatisfaction through modifying CEO pay in order to reduce any potential financial and non-financial (e.g. reputation, power and honor) consequences (Alissa, 2015; Correa & Lel, 2016; Ferri & Maber, 2013; Kimbro & Xu, 2016). A contrasting viewpoint is to the effect that Say-on-Pay interferes in the role of the board that leads to suboptimal decisions that cater to short-term shareholders' interests (Cai & Walkling, 2011; Mangen & Magnan, 2012). Mixed empirical evidence on the effect of Say-on-Pay on executive compensation suggests that the issue is far from resolved. Such lack of consensus shows in literature reviews focusing on Say-on-Pay. To date, there has been three literature reviews that summarize the existing prior studies of Say-on-Pay (Lozano-Reina & Sánchez-Marín, 2020; Obermann & Velte, 2018; Stathopoulos & Voulgaris, 2016). Stathopoulos and Voulgaris (2016) analyze the effectiveness of Say-on-Pay by discussing the "intended" consequences of Say-on-Pay on market reaction and executive compensation. They classify the literature on the impact of Say-on-Pay on executive compensation into two categories based on whether the vote is mandatory or voluntary. Secondly, Obermann and Velte (2018) synthesize and discuss the main determinants and consequences of executive compensation-related shareholder activism and Say-on-Pay votes. Finally, Lozano-Reina and Sánchez-Marín (2020) provide a descriptive review on the conceptualization of Say-on-Pay used in the literature (e.g. measurement, theoretical perspectives). Also, the authors summarize the determinants and outcomes of Say-on-Pay, by classifying them into internal and external determinants, and firm and compensation outcomes, respectively.

These literature reviews provide a comprehensive understanding of the determinants and consequences of Say-on-Pay. However, all the studies discussed examine a one-way directional association between Say-on-Pay and other factors. Prior literature ignores the fact that Say-on-Pay can play simultaneously two roles of being a determinant and consequence in relation to other governance or managerial factors. Thus, building upon prior literature, I intend to develop a conceptual framework that will synthesize and then classify the determinants and consequences of Say-on-Pay into categories: executive compensation, firm, and governance characteristics. Also, this study builds on prior literature and on the investigation of the associations among Say-on-Pay, non-GAAP reporting and compensation committee to develop a conceptual model. Through the model, I intend to illustrate how factors, such as non-GAAP reporting quality and compensation committee quality, are associated with Say-on-Pay in a closed interconnected loop.

This conceptual study contributes to research on Say-on-Pay in the following ways. First, it extends the three prior literature reviews by including additional factors examined in more recent studies. For instance, prior literature reviews discuss shareholder dissatisfaction in firms with weak governance. However, we observe shareholders also appreciate firms with strong governance, such as the presence of women on compensation committees, as reflected in the level of vote support (Alkalbani et al., 2019). Moreover, this study includes the presentation of the use of social media as a factor that influences shareholders' perception on executive compensation (Kelton & Pennington, 2020).

Second, the reviews reach a consensus on the impact of certain attributes on Say-on-Pay. However, the literature review section of this study presents contradictory evidence and refutes their generalizations. For instance, Lozano-Reina and Sánchez-Marin (2020) and Cullinan et al. (2017) highlight the importance of non-financial factors, such as CSR, on Say-on-Pay. However, I discuss contradictory evidence that CSR with poor financial performance is disregarded by shareholders (Obermann, 2020).

Finally, prior literature conveys one-directional associations between the determinants and Say-on-Pay on one side, and Say-on-Pay and its consequences on the other. However, prior literature ignores the fact that these variables can be interconnected through a closed loop. In other words, a factor can play a dual role as both a determinant and a consequence of Say-on-Pay. Thus, in the conceptual model, I present how non-GAAP reporting acts as both a

consequence and determinant of Say-on-Pay. Say-on-Pay leads to an increased likelihood and reduced quality of non-GAAP reporting. Simultaneously, the reduced quality of non-GAAP reporting triggers shareholder dissatisfaction through Say-on-Pay.

Practically, the study addresses the concern raised by the Council of Institutional Investors (CII). The CII requests the Securities and Exchange Commission (SEC) to regulate non-GAAP reporting as it is concerned that managers may conceal weak performance in favor of shareholders' Say-on-Pay support (Bertsch & Mahoney, 2019). Based on the conceptual model, the reduced quality of non-GAAP reporting is a result of the introduction of Say-on-Pay, as well as a factor of concern. Thus, managers are without doubt to be blamed for their unethical and opportunistic non-GAAP reporting. However, regulators and policy makers should also be cautious about the undesired consequences of their regulations.

The remainder of the review proceeds as follows: the next section identifies the major theoretical perspectives used in Say-on-Pay literature. It also discusses and classifies the literature into two categories that are the determinants and consequences of Say-on-Pay. Section 3 develops and illustrates the conceptual model between Say-on-Pay and compensation committee on one hand, and between Say-on-Pay and non-GAAP reporting on the other. Finally, section 4 concludes the paper.

4.2 Literature Review Synthesis

4.2.1 Theoretical Perspectives

Prior studies discuss Say-on-Pay effectiveness from opposing perspectives. From a positive perspective, some prior studies express the view that say-on-Pay is an effective governance mechanism that is able to ensure more efficient compensation arrangements (e.g. Alissa, 2015; Brunarski et al., 2015; Burns & Minnick, 2013; Cai & Walkling, 2011; Hadley, 2017; Kimbro & Xu, 2016; Liang et al., 2020; Mangen & Magnan, 2012; Monem & Ng, 2013; Sanchez-Marin et al., 2017). These studies are based on the prevalent agency theory. As the separation of ownership and control creates agency conflicts (Jensen & Meckling, 1976), governance mechanisms need to be in place to monitor managers and align the interests between managers and shareholders. Thus, from an agency-based theoretical perspective, Say-on-Pay is an effective governance mechanism that allows shareholders to intervene and express

their satisfaction regarding executive compensation. This intervention enhances the alignment of executive compensation with performance.

However, the enactment of Say-on-Pay may have some undesirable consequences. Mangen and Magnan (2012) highlight that while agency costs are reduced between large shareholders and managers following the implementation of Say-on-Pay, they may also be raised between blockholders and other minority shareholders or firm stakeholders, which interests are not necessarily identical. More specifically, Say-on-Pay opens the door for direct contacts between blockholders and a firm (to avoid a negative vote, consultations may take place before hand) while other shareholders may not be part of such consultation. Moreover, other theoretical perspectives examine the negative impact of Say-on-Pay. For instance, based on the window-dressing hypothesis, Brunarski et al. (2015) find that overcompensated managers with low Say-on-Pay support try to placate shareholders by superficial acts that do not really change firm value and performance. Similarly, boards and compensation committees may engage in impression management by providing biased compensation reports and taking on symbolic actions in response to shareholder dissatisfaction (Mangen & Magnan, 2012; Sanchez-Marin et al., 2017).

Prospect theory provides an alternative perspective on the effectiveness of Say-on-Pay. Within such a theoretical perspective, it can be claimed that shareholders adjust their Say-on-Pay votes asymmetrically according to a framework based on executive compensation and firm performance. For instance, Krause et al. (2013) show in their experimental study that shareholders, who are loss averse, are more likely to vote against executive compensation when the compensation is high and firm performance is low. However, shareholders support Say-on-Pay when performance is high regardless of the level of executive compensation. In other words, inefficient compensation arrangements may still be voted in if a firm's performance is considered adequate or superior by shareholders. Thus, by considering all the different theoretical perspectives, the effectiveness of Say-on-Pay cannot be concluded from prior literature.

4.2.2 Determinants of Say-on-Pay

Say-on-Pay is a source of shareholder activism to express their opinions on executive compensation. In its direct and simple form, an increase in executive compensation is associated with higher dissatisfaction through Say-on-Pay. However, executive compensation

is not a simple measure, but it consists of different structures and several components. Thus, prior literature heavily investigates what structures and which components influence shareholders' Say-on-Pay votes. Beyond executive compensation, firm and governance factors could also influence shareholders' support.

4.2.2.1 Executive Compensation

First, related to the overall compensation structure rather than individual parts, there is extensive evidence that shareholders react to high total or excessive compensation through negative Say-on-Pay votes in the U.S. (Armstrong et al., 2013; Balsam et al., 2016; Cai & Walkling, 2011; Ertimur et al., 2013) and in the UK (Conyon & Sadler, 2010; Gregory-Smith et al., 2014; Hooghiemstra et al., 2017). In Australia, higher shareholder dissent is associated to high executive payments (Kent et al., 2018) or to weak pay-performance link (Liang et al., 2020). However, Grosse et al. (2017) refute such a result. Moreover, shareholders are highly concerned with the alignment of pay to performance. For instance, a low alignment increases shareholders' dissent, and it is the main target for labor unions who ignore compensation excess (Cai & Walkling, 2011).

Second, regarding the individual parts of executive compensation, shareholders favor salary payments which consist of smaller payments (Balsam et al., 2016). However, they oppose longer-term payments, such as severance agreements (Ferri & Maber, 2013; Hooghiemstra et al., 2017).

4.2.2.2 Firm Characteristics

Firm size and performance are among the most important firm characteristics that influence shareholders in their approval to executive compensation. Large firms are more susceptible to shareholder scrutiny and dissatisfaction, rather than smaller ones with inefficient compensation contracts (Burns & Minnick, 2013; Cai & Walkling, 2011; Hooghiemstra et al., 2017).

Second, firms with better performance are more likely to receive shareholders' approval on executive compensation (Alissa, 2015; Balsam et al., 2016; Bordere et al., 2015; Brunarski et al., 2015; Ertimur et al., 2013; Kimbro & Xu, 2016; Krause et al., 2014). Regardless of executive compensation, poor performance (Alissa, 2015; Balsam et al., 2016) or higher return

volatility (Kimbrow & Xu, 2016) is sufficient to repel Say-on-Pay support. This is consistent with prospect theory in which shareholders are concerned with loss aversion and vote against executive compensation in terms of poor performance. However, shareholders can realize if the income generated is from income-increasing non-recurring gains, and so they express their dissent (Kaplan & Zamora, 2018).

In addition to the importance of financial performance, shareholders also consider non-financial performance. In this regard, Cullinan et al. (2017) find an association between a non-financial performance indicator, which is CSR strength, on shareholders' Say-on-Pay votes in the U.S. The study focuses only on the non-financial performance, disregarding the complementary impact of its financial situation. To address this issue, Obermann (2020) refutes the results and finds that shareholders disregard CSR-performance with poor financial performance.

In summary, the rationale underlying Say-on-Pay regulations is to allow shareholders a direct input into executive compensation determination. However, in practice, when voting, shareholders will prioritize a firm performance, which will then determine their vote on executive compensation. Thus, for managers, it becomes critical to project a level of financial performance that will satisfy shareholders.

4.2.2.3 Governance Characteristics

Prior research examines how various governance characteristics influence shareholders in their voting decisions. For instance, when shareholders believe that firm's governance and board monitoring is at risk, they take on the role and express their dissent on executive compensation. Shareholder dissatisfaction is associated with low governance quality, characterized by lower board independence (Cai & Walkling, 2011), weaker internal controls (Bordere et al., 2015), lower earnings quality (Kimbrow & Xu, 2016), and longer CEO tenure (Armstrong et al., 2013). Moreover, social ties between CEO and members of the compensation committee jeopardize directors' independence leading to an unfair pay that is rejected by shareholders (Kaplan et al., 2015). By contrast, the presence of women on remuneration committees signals a more effective monitoring leading shareholders to support executive compensation (Alkalbani et al., 2019).

The literature cannot exclude the significance of shareholders' characteristics associated with Say-on-Pay. Firms with long-term investors, who already provide monitoring abilities, are more likely to experience favorable votes (Stathopoulos & Voulgaris, 2016). Managers may try to conceal their excess compensation through less readable remuneration reports or by opportunistically selecting peer companies for benchmarking, institutional investors are able to detect this behavior and vote against their compensation (Hadley, 2017; Hooghiemstra et al., 2017). However, the advantage of obfuscation is limited to moderate excess pay and is subject to skepticism when the excess pay is clear (Hemmings et al., 2020).

Although the ultimate decision for the vote is for shareholders, other stakeholders can further influence their decision. For instance, most shareholders follow managers' recommendations regarding the frequency of future Say-on-Pay votes (Ferri & Oesch, 2016). Moreover, the use of Twitter as a disclosure channel, rather than firm's website, is a signal of CEO's enhanced social capital and trustworthy, which leads to higher support for executive compensation (Kelton & Pennington, 2020). Similarly, proxy advisor recommendations can justify a high proportion of shareholder votes (Larcker et al., 2015). However, Ertimur et al. (2013) show that shareholders do not follow blindly proxy advisor recommendations, but they consider the rationale of such an advice along with other firm characteristics.

From a negative perspective, the presence of shareholders, who are insiders to the firm or board directors, is associated with a higher support to executive compensation as they feel a sense of loyalty to executives and support their compensation (Conyon & Sadler, 2010; Cullinan et al., 2017; Ertimur et al., 2013; Hooghiemstra et al., 2017).

In summary, although the vote is, by regulation, based on executive compensation, shareholders consider various firm and governance characteristics to shape their decision. While various factors can direct shareholders, shareholders can fully understand all the information and attributes provided. The conceptual model of this study further explains this notion. The qualities of both the compensation committee and non-GAAP reporting can influence shareholders' votes. However, shareholders are able to understand the opportunism behind the low quality of non-GAAP metrics.

4.2.3 Consequences of Say-on-Pay

Results of prior literature examining the impact of various factors on Say-on-Pay support is rather conclusive. Better performance and governance, along with an appropriate executive compensation, gain shareholders' approval to Say-on-Pay. However, the debate centers on the effectiveness of Say-on-Pay and its ability to reduce excess compensation packages.

4.2.3.1 Executive Compensation

Evidence on the impact of Say-on-Pay on executive compensation is mixed. A first stream of research confirms the effectiveness of Say-on-Pay as a governance mechanism that is able to improve executive pay packages. For instance, boards respond to shareholder dissent by reducing excessive executive compensation to suboptimal level, or forcing the CEO out of office (Alissa, 2015; Carter & Zamora, 2007). This compensation reduction is more pronounced in firms with poor performance. Moreover, shareholder dissent can affect specific controversial compensation components, such as reducing severance arrangements and improving the alignment of pay to performance (Ferri & Maber, 2013).

Another stream of literature does not find that Say-on-Pay voting impacts executive compensation. For example, Conyon and Sadler (2010) do not find an association between the executive compensation package and the votes held. Also, after the implementation of Say-on-Pay, the executive pay plan did not face any changes (Cuñat et al., 2016). Only when an over-threshold level of dissent is passed that the firm would make adjustments to the plan. If the level of dissent is below a certain threshold (e.g., 10% Gregory-Smith et al. (2014), 20% Del Guercio et al. (2008), or 30% Ertimur et al. (2013)), directors ignore such a low-dissent and legitimize the pay package. More recently, evidence shows that directors do not consider adjusting the executive pay following a Say-on-Pay vote, unless the disclosed ratio of CEO pay to the median compensation of firm's employees is below the industry average (Norman et al., 2020).

4.2.3.2 Market Reaction

Considering that the impact of Say-on-Pay on executive compensation is inconclusive, it is worth determining shareholders' perceptions of its effectiveness. One stream of research

finds that Say-on-Pay is recognized as effective, especially for firms with poor governance. For instance, the market reacts positively to the announcement of the introduction of Say-on-Pay (Cai & Walkling, 2011; Correa & Lel, 2016; Ferri & Maber, 2013). This reaction is particularly more pronounced in firms with excess pay and weak governance (Hitz & Müller-Bloch, 2015). Firms in the U.S., with a public float of less than \$75 million, experienced a negative market reaction to their exemption from Say-on-Pay (Iliev & Vitanova, 2019). This confirms shareholders' favor to the introduction of the regulation. On the other hand, another stream of research finds a negative market reaction to the introduction of Say-on-Pay (Larcker et al., 2015). This is because firms consider that the costs of adopting Say-on-Pay outweigh its benefits.

4.2.3.3 Firm Characteristics

Say-on-Pay aims to improve executive compensation plan. However, as firm performance is a primary determinant of the votes held, firms also improve their performance in response to the adoption of Say-on-Pay and to its level of support. Firms that agree to adopt Say-on-Pay experience an improvement in their accounting and operational performance following the vote (Cuñat et al., 2016). When subject to shareholder dissatisfaction, firms put effort in improving their position. Thus, compensation reporting increases (Grosse et al., 2017; Hadley, 2017), investor relations are intensified (Ertimur et al., 2013), and audit fees increases due to an increased possibility of litigation (Bordere et al., 2015). Higher chance of CEO turnover following shareholder dissent is identified in the UK, although such an association is not detected in a U.S. sample of firms (Alissa, 2015; Cuñat et al., 2016). Managers even go beyond improving firm performance to placate shareholders by window dressing engagements. For example, following shareholder dissatisfaction along with excess executive compensation, managers tend to increase dividends disbursement and reduce leverage to appease shareholders for favorable subsequent votes (Brunarski et al., 2015).

The inconclusive results of the benefits of Say-on-Pay may be due to several factors that play a role in reducing its efficiency. Few studies attribute the inefficiency and difference in results to the settings surrounding the adoption of Say-on-Pay. For instance, Bowlin et al. (2020) distinguish the efficiency of Say-on-Pay in a mandatory versus voluntary setting in an experimental design. They find that the voluntary implementation signals that the compensation process is fairer and more trustworthy than when it is mandated. In a similar

comparison but unique context, Borthwick et al. (2020) compare Say-on-Pay efficiency in Australia as the regulation changes from non-binding to a two-strike rule. Thus, shareholders are more prudent and less aggressive when the regulation is updated to a two-strike model.

4.3 Conceptual Model

Based on the above, studies have extensively examined how various determinants, whether executive pay or firm and governance characteristics, influence shareholders' perception of executive compensation. Moreover, another strand of research examines the impact of Say-on-Pay on the change in executive compensation, market reaction and managers' behavior. The studies build on a one-way direction in the association between these different factors and shareholders' Say-on-Pay support. However, the associations can have a two-way directional effect. For example, while a certain determinant can have an impact on shareholders' perception, the support level can also lead to modifications to the considered factor; thus, forming connected associations or a closed loop. In this regard, based on findings of this dissertation along with prior findings, I build a conceptual model that provides an association among several factors including Say-on-Pay support, non-GAAP reporting and compensation committee characteristics.

[INSERT Model 1 ABOUT HERE]

In broad terms, this conceptual model represents the interactions between Say-on-Pay and compensation committee quality on one hand, and between Say-on-Pay and non-GAAP reporting quality on the other.

4.3.1 Say-on-Pay and Compensation Committee

The executive compensation plan is the purview of the compensation committee. The compensation committee designs the executive compensation plan and submits the plan to the board of directors for recommendations. Prior literature confirms that in the presence of a high-quality committee, executive compensation components are well-aligned with firm performance (Sun et al., 2009; Sun & Cahan, 2009). The compensation committee quality is determined by the aggregate score of several attributes that include the proportion of directors elected after CEO's appointment, their expertise, their other executive roles, their ownership, the number of board seats they hold, and the size of the committee. Executive compensation

design is the basis of shareholders' Say-on-Pay support. To consider a committee is of high-quality, the committee consists of a low proportion of interdependent directors, of CEO directors, and of directors sitting on more than 3 board seats, as well as a smaller committee size. However, directors' expertise enhances its quality. These attributes that represent human and social capital of directors signify the potential ability of the committee to fulfill its duty to design an appropriate compensation plan. Thus, based on prior results and findings of Chapter 3, a high-quality compensation committee is positively associated with shareholders' perception of executive compensation, via Say-on-Pay support. When shareholders acknowledge the quality of the compensation committee, shareholders support the executive compensation plan by voting in favor to this plan in their Say-on-Pay votes.

However, shareholders unsatisfied with the executive compensation plan are likely to provide a negative Say-on-Pay vote, an indication of low shareholder support for the way the board and its compensation committee, design and oversee executive compensation arrangements. If the compensation plan is not well-designed to align with firm performance, this signals that the compensation committee members have failed to fulfill their role. The failure could be due to the loss of certain attributes that qualify the committee to provide executives a compensation that they deserve. In this regard, the California Public Employees' Retirement System (CalPERS) voted against directors who were serving on the compensation committee when voting against the executive compensation.

In short, a compensation committee that exhibits high-quality attributes designs an appropriate executive compensation package. Shareholders acknowledge the effort and quality through voting in favor to executive compensation. However, this relation applies also in reverse. That is, shareholders, who vote against an executive compensation plan by considering it inappropriate, will also vote against the directors of the compensation committee that are not qualified to fulfill their role. While the quality of compensation committee serves as a determinant to Say-on-Pay, a low Say-on-Pay support leads to members losing their seats on the committee.

4.3.2 Say-on-Pay and non-GAAP Reporting

Another important consideration is the interaction between Say-on-Pay and non-GAAP reporting. Since the introduction of Say-on-Pay across the world, empirical research aims to identify the various determinants and consequences of Say-on-Pay, and their associations with

shareholder support (Lozano-Reina & Sánchez-Marín, 2020; Obermann & Velte, 2018; Stathopoulos & Voulgaris, 2016). Most importantly, results indicate that firm's financial performance is a significant contributor to Say-on-Pay, along with executive compensation. Firms with better performance are more likely to gain shareholder support (e.g. Bordere et al., 2015; Kimbro & Xu, 2016). Consequently, concerns are raised about managers' motivation to boost firm's performance to justify their compensation package and gain shareholders' support. The Council of Institutional Investors submitted a petition to the SEC to regulate the disclosure of non-GAAP metrics in the proxy statement of the CD&A. Based on the opportunistic use of non-GAAP reporting, the CII fears that these unaudited metrics emphasize good performance in favor of shareholders' Say-on-Pay support. However, the SEC refuses to perform any adjustments to its non-GAAP regulation and considers that shareholders are able to understand the disclosure provided (Ho, 2019). Thus, I illustrate how non-GAAP reporting plays a dual role, as a determinant and a consequence of Say-on-Pay.

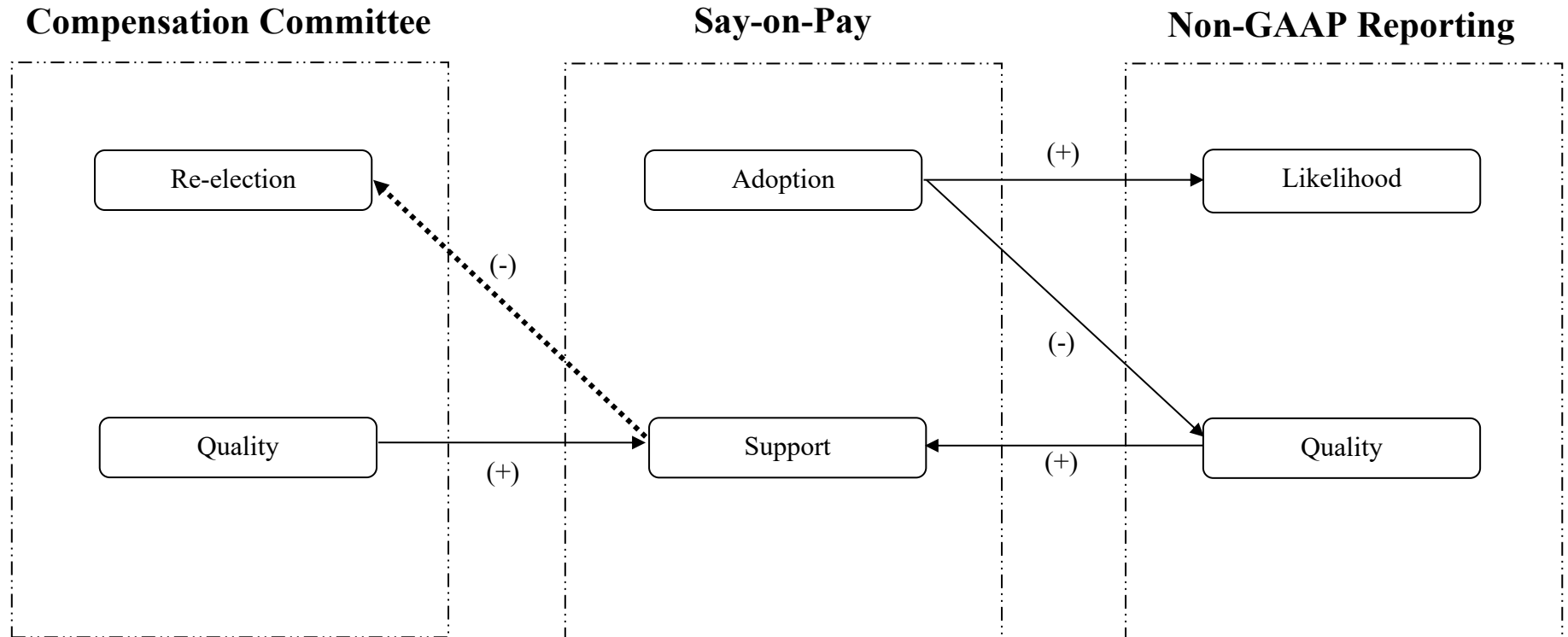
A debate centers around the motivation for disclosing non-GAAP metrics. From a positive perspective, non-GAAP metrics are needed for external users and shareholders to understand a firm's underlying operations. GAAP earnings is an aggregate measure of all recurring and non-recurring activities. However, managers may need to convey to shareholders the performance of the main operations of the firm. Thus, they exclude non-recurring items and represent the operating performance through non-GAAP metrics. However, managers may take advantage that these metrics are unaudited. By excluding items beyond a one-time gain or loss, managers can inflate firm's earnings and conceal firm's weak performance (Doyle et al., 2013). Research shows two motivations that drive managers to ignore their ethical principles and engage in opportunistic non-GAAP reporting. One motivation is that managers exposed to the pressure of meeting earnings benchmarks will exclude income-decreasing items to achieve higher non-GAAP metrics (Doyle et al., 2013; Isidro & Marques, 2015). The second motivation is that managers aim to placate shareholders with better firm performance to justify and save their compensation package. This motivation is more pronounced especially when the compensation components include performance targets. For instance, managers evaluated based on performance, such as bonus plan or adjusted earnings, are more likely to artificially inflate their compensation through income-increasing non-GAAP metrics (Black et al., 2021; Curtis et al., 2021).

Chapter 2 of this dissertation examines an additional motivating factor, relevant to the managerial incentive-based motivation, for opportunistic non-GAAP reporting. It investigates the impact of the introduction of Say-on-Pay on non-GAAP reporting. Say-on-Pay allows shareholders to express their opinion regarding executive compensation. While executive compensation is the basis of Say-on-Pay vote, research shows that shareholders are also concerned about firm's performance prior to voting (Bordere et al., 2015; Kimbro & Xu, 2016). As a result, exposed to a Say-on-Pay vote, managers are more likely to inflate firm performance. As non-GAAP metrics are unaudited, managers have the full discretion in their exclusion choices with less exposure to scrutiny. In this regard, findings show that the introduction of Say-on-Pay significantly provokes managers to disclose non-GAAP metrics. Not only do managers report non-GAAP metrics following Say-on-Pay, but they also exclude recurring items from these metrics. In other words, after the introduction of Say-on-Pay, the likelihood of non-GAAP reporting increased while the quality of these metrics is reduced.

The greatest concern, however, is whether shareholders are misled by managers' intentional behavior in reporting non-GAAP metrics opportunistically. Chapter 3 focuses on examining whether non-GAAP reporting acts as a determinant of Say-on-Pay. Results assure the public and practitioners that managers are not able to mislead shareholders of favorable firm performance and gain their trust for Say-on-Pay support. The findings, although with low significance, show that shareholders can understand managers' intention and can differentiate if the metrics reported are of low quality. On the contrary, shareholders penalize managers of their engagement and provide a low support to their compensation package.

In short, there is an interconnected closed relationship among the concepts of Say-on-Pay and non-GAAP reporting. First, the introduction of Say-on-Pay is a motivational factor for managers to voluntarily report non-GAAP metrics. Moreover, the metrics they report are of low-quality following Say-on-Pay. Consequently, the low quality of non-GAAP reporting triggers shareholders to vote against the executive compensation in subsequent voting. The closed loop that forms between these two concepts shows that non-GAAP reporting acts as both a consequence and determinant for Say-on-Pay.

Model 1 Associations among concepts: Say-on-Pay, Compensation Committee and non-GAAP reporting



———— Associations from Chapters 2 and 3

..... Associations from prior evidence

4.4 Conclusion

The aim of this study is twofold. First, it synthesizes prior Say-on-Pay literature and classifies it into two categories. The two categories discuss the determinants and consequences of Say-on-Pay. Second, this study builds on prior literature and the associations among Say-on-Pay, non-GAAP reporting and compensation committee to develop a conceptual model. This model illustrates how factors, such as non-GAAP reporting quality and compensation committee quality are associated with Say-on-Pay in a closed interconnected loop.

The first loop of the model illustrates that shareholders appreciate a high-quality compensation committee that is able to design an appropriate executive compensation package. Their appreciation reveals in their support to executive compensation, via Say-on-Pay. However, when shareholders are unsatisfied with the executive compensation and vote against it in their Say-on-Pay votes, then they also vote against the directors of the compensation committee. In this case, the compensation committee serves as a determinant to Say-on-Pay through its quality level. At the same, the compensation committee is a consequence of Say-on-Pay dissatisfaction, where shareholders vote against the re-election of its members.

The second loop of the model represents the interconnected association between Say-on-Pay and non-GAAP reporting. The introduction of Say-on-Pay acts as a motivational factor to the opportunistic use of non-GAAP reporting. Consequently, when managers report low-quality non-GAAP metrics, shareholders get triggered that these metrics conceal the true performance of the firm; thus, they vote against executive compensation in their Say-on-Pay voting process. These associations reveal a circular connection between non-GAAP reporting and Say-on-Pay.

The purpose leading to the enactment and spread of Say-on-Pay is to limit excess and unjustified executive compensation. However, the model represents Say-on-Pay as a regulation that has dual roles beyond its main purpose. It serves as a determinant of the election of compensation committee members and the quality of non-GAAP reporting. Simultaneously, shareholders' Say-on-Pay support is a consequence of the quality of compensation committee and the quality of non-GAAP reporting.

Academically, the literature review synthesis and the conceptual model presented contribute to prior research that has mainly examined Say-on-Pay from one side. On one hand, prior literature examines the impact of the introduction of the regulation and its level of support. On the other hand, another strand of literature investigates the determinants that shape shareholders' perception of executive compensation. However, this study goes beyond examining a unique direction of Say-on-Pay to develop a circular connected model between Say-on-Pay and attributes of non-GAAP reporting and compensation committee.

Practically, the study raises awareness regarding the need to understand all aspects of Say-on-Pay. Policy makers introduced the Say-on-Pay regulation as a result of the huge concern and public attention to the excessive level of executive compensation. Similarly, regulators and shareholders fear the opportunistic use of non-GAAP reporting. Each group of regulators and shareholders raise the voice to their own interest. However, with such a model that represents the interconnection between the concepts of non-GAAP reporting and Say-on-Pay, practitioners should collaborate to understand and determine the unobvious relations between various concepts. This leads to improved regulations and avoid undesired consequences.

Chapter 5: Conclusion

This dissertation comprises three essays which discuss crucial topics related to Say-on-Pay in the U.S. The first essay demonstrates how the introduction of Say-on-Pay impacts managers' non-GAAP reporting practice. The second essay reveals that attributes, other than executive pay, can influence shareholders' perception of executive compensation. In particular, the essay shows the impact of each of compensation committee quality and non-GAAP reporting quality on shareholders' support. The third essay uncovers the trends of the determinants and consequences of Say-on-Pay in prior literature. The essay also conceptualizes the interrelated associations between Say-on-Pay and the compensation committee, as well as, between Say-on-Pay and non-GAAP reporting practice.

The first essay contributes to the debate on the motivation of non-GAAP disclosure. The debate centers around whether non-GAAP reporting is beneficial for additional disclosure about firm's operations, or it is a deceiving measure to inflate firm performance for external users. Results show that, for incentive-based purposes when shareholders are involved through the Say-on-Pay voting process, managers are more likely to report non-GAAP metrics opportunistically by excluding recurring items from these metrics. As the vote could be held either annually, biennially, or triennially, the comparison shows that when the firm is subject to a vote, managers are more likely to report lower-quality non-GAAP metrics. It also adds to the Say-on-Pay literature by focusing on the "unintended" consequences of the regulation.

The second essay probes into one of CII's highest concerns about shareholders being deceived by reported non-GAAP metrics. In this regard, results show that shareholders can understand these metrics and can differentiate managers' motivation. On the other hand, shareholders vote against executive compensation when managers disclose low-quality non-GAAP metrics. Moreover, the essay further examines the influence of the compensation committee on shareholders' perception of executive compensation. In particular, shareholders trust the design of executive pay when the compensation committee is of high quality.

The third essay synthesizes prior literature to classify prior research on the position of Say-on-Pay as a determinant and a consequence. Also, the essay builds upon the dual role of Say-on-

Pay to demonstrate a conceptual model of the interrelation between Say-on-Pay and non-GAAP reporting.

In general, the dissertation contributes to the governance literature. The introduction of Say-on-Pay legislation gives rise to a recent external governance mechanism that allows shareholders to directly get involved and express their opinion regarding executive pay. A huge concern centers about its effectiveness and ability to reduce excess pay (Alissa, 2015; Cai & Walkling, 2011; Cuñat et al., 2016; Ferri & Maber, 2013; Kimbro & Xu, 2016). However, scant research focuses on its unintended consequences; for instance, Bordere et al. (2015) examine the audit environment following Say-on-Pay. Brunarski et al. (2015) show that firms tend to placate shareholders of better firm outlook, in return for favorable Say-on-Pay votes. While the purpose of Say-on-Pay is direct and clear, it is not without flaws. This dissertation divulges the unintended consequences of Say-on-Pay. This is shown in the first essay through the opportunistic disclosure of non-GAAP metrics. Moreover, the dissertation adds to the governance literature, in general, and Say-on-Pay in particular, by identifying the determinants of the support. This dissertation shows that shareholders' perception on executive compensation is not only about the level and structure of the pay. The second and third essays supports the idea that before shareholders form their decision, they take into account other factors too such as the quality of firm's compensation committee and its non-GAAP reporting quality.

Moreover, this dissertation has practical implications. An ongoing back-and-forth debate exists between the CII and the SEC regarding the need to regulate non-GAAP reporting as it may be an important indicator of firm performance used by shareholders to cast their Say-on-Pay votes. Moreover, CII is concerned about the ability of these numbers to deceive shareholders. Thus, this dissertation addresses this concern and agrees with the CII that managers may attempt to mislead shareholders by boosting firm performance, an opportunity offered to them through non-GAAP reporting. Results provide additional support for the ethical concerns raised by non-GAAP reporting and the CII's efforts in regulating these metrics. However, results of this dissertation assure the CII that shareholders are not misled, and managers' attempts fail.

In this dissertation, the non-GAAP earnings measure is based on data provided by I/B/E/S. I acknowledge that I/B/E/S actual earnings is not a perfect proxy for the non-GAAP figures

disclosed by managers, as analysts may do adjustments to these numbers. According to Bentley et al. (2018), I/B/E/S numbers underestimate managers' aggressiveness in non-GAAP reporting. However, if that is true, results of the study still show managerial aggressiveness even if it is diminished. It would be interesting in the future to conduct studies on non-GAAP based on data gathered from press releases and proxy statements. Moreover, the second essay assesses compensation committee quality based on six attributes that are considered significant in the process of designing executive compensation, following Sun and Cahan (2009). Future research can thus extend the literature to examine other attributes that may have an influence on executive pay design. Moreover, it is worth investigating if attributes of the board as a whole can change shareholders' perception.

Concerns regarding Say-on-Pay and non-GAAP reporting are not limited to the U.S. but have also extended globally and affected corporate norms across the world. In Canada, for example, although Say-on-Pay is voluntary, there is a movement towards mandating certain federally incorporated firms under the Canada Business Corporations Act (CBCA) to hold an annual non-binding shareholder Say-on-Pay vote, similar to its practice in the U.S. While Say-on-Pay has yet to become a legal requirement in Canada, its adoption has been on the rise among Canadian public firms, reaching 78 percent of TSX 60 firms and 48 percent of TSX listed issuers in 2018 (Davies, 2018). Similarly, the Canadian Coalition for Good Governance (CCGG), in their December (2019) study, reported a significant increase in the prevalence of non-GAAP measures in compensation plans among Canadian listed firms to inflate firm performance thereby leading to higher compensation awards. Learning from the experience of early adopters in a mandatory context, Canadian policy makers will be able to identify the value of moving forward with the CBCA's proposed amendment. Moreover, it would be interesting to look at the interrelationships between Say-on-Pay and non-GAAP reporting in a voluntary context. For instance, Bowlin et al. (2020) find that Say-on-Pay is more efficient in a voluntary setting, rather than when it is mandated.

References

- Albring, S. M., Cabán-García, M. T., & Reck, J. L. (2010). The value relevance of a non-GAAP performance metric to the capital markets. *Review of Accounting and Finance*, 9(3), 264–284.
- Alissa, W. (2015). Boards' Response to Shareholders' Dissatisfaction: The Case of Shareholders' Say on Pay in the UK. *European Accounting Review*, 24(4), 727–752.
- Alkalbani, N., Cuomo, F., & Mallin, C. (2019). Gender diversity and say-on-pay: Evidence from UK remuneration committees. *Corporate Governance: An International Review*, 27(5), 378–400.
- Alshabibi, B. (2021). The Role of Institutional Investors in Improving Board of Director Attributes around the World. *Journal of Risk and Financial Management*, 14(4), 166.
- Armstrong, C. S., Gow, I. D., & Larcker, D. F. (2013). The efficacy of shareholder voting: Evidence from equity compensation plans. *Journal of Accounting Research*, 51(5), 909–950.
- Aubert, F. (2009). *The Relative Informativeness of GAAP and Pro Forma Earnings Announcements in France* (SSRN Scholarly Paper ID 1414423). Social Science Research Network. <https://doi.org/10.2139/ssrn.1414423>
- Balsam, S., Boone, J., Liu, H., & Yin, J. (2016). The impact of say-on-pay on executive compensation. *Journal of Accounting and Public Policy*, 35(2), 162–191.
- Bansal, N., Seetharaman, A., & Wang, X. (Frank). (2013). Managerial risk-taking incentives and non-GAAP earnings disclosures. *Journal of Contemporary Accounting & Economics*, 9(1), 100–121.
- Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Factors Influencing Voluntary Corporate Disclosure by Kenyan Companies. *Corporate Governance: An International Review*, 14(2), 107–125.
- Barth, M., Gow, I., & Taylor, D. (2012). Why Do Pro Forma and Street Earnings not Reflect Changes in GAAP? Evidence From SFAS 123R. *Review of Accounting Studies*, 17(3), 526–562.
- Baumker, M., Biggs, P., McVay, S. E., & Pierce, J. (2013). The Disclosure of Non-GAAP Earnings Following Regulation G: An Analysis of Transitory Gains. *Accounting Horizons*, 28(1), 77–92.
- Beasley, M. S. (1996). An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud. *The Accounting Review*, 71(4), 443–465.

- Belkhir, M. (2009). Board of directors' size and performance in the banking industry. *International Journal of Managerial Finance*, 5(2), 201–221.
- Bentley, J. W., Christensen, T. E., Gee, K. H., & Whipple, B. C. (2018). Disentangling Managers' and Analysts' Non-GAAP Reporting. *Journal of Accounting Research*, 56(4), 1039–1081.
- Bertsch, K. A., & Mahoney, J. P. (2019, April 29). *Re: Petition for Rulemaking Regarding Disclosures on Use of Non-GAAP Financials in Proxy Statement CD&As* [Personal communication].
- Bhattacharya, N., Black, E. L., Christensen, T. E., & Larson, C. R. (2003). Assessing the relative informativeness and permanence of pro forma earnings and GAAP operating earnings. *Journal of Accounting and Economics*, 36(1), 285–319.
- Black, D. E., Black, E. L., & Christensen, T. E. (2018). *Non-GAAP Earnings for Contracting and Financial Disclosure*.
- Black, D. E., Black, E. L., Christensen, T. E., & Gee, K. H. (2021). CEO Pay Components and Aggressive Non-GAAP Earnings Disclosure. *Journal of Accounting, Auditing & Finance*.
- Black, D. E., & Christensen, T. E. (2009). US Managers' Use of 'Pro Forma' Adjustments to Meet Strategic Earnings Targets. *Journal of Business Finance & Accounting*, 36(3–4), 297–326.
- Black, E. L., Christensen, T. E., Kiosse, P. V., & Steffen, T. D. (2017a). Has the Regulation of Non-GAAP Disclosures Influenced Managers' Use of Aggressive Earnings Exclusions? *Journal of Accounting, Auditing & Finance*, 32(2), 209–240.
- Black, E. L., Christensen, T. E., Joo, T. T., & Schmardebeck, R. (2017b). The Relation Between Earnings Management and Non-GAAP Reporting. *Contemporary Accounting Research*, 34(2), 750–782.
- Bordere, X. J., Ciccotello, C. S., & Grant, C. T. (2015). What Does “Say on Pay” Say about Audit Risk? *Current Issues in Auditing*, 9(1), A1–A12.
- Borthwick, J., Jun, A., & Ma, S. (2020). Changing board behaviour: The role of the 'Two Strikes' rule in improving the efficacy of Australian Say-on-Pay. *Accounting & Finance*, 60(S1), 827–876.
- Bowen, R. M., Davis, A. K., & Matsumoto, D. A. (2005). Emphasis on Pro Forma versus GAAP Earnings in Quarterly Press Releases: Determinants, SEC Intervention, and Market Reactions. *The Accounting Review*, 80(4), 1011–1038.
- Bowlin, K. O., Christ, M. H., & Griffin, J. B. (2020). Say-on-Pay and the Differential Effects of Voluntary versus Mandatory Regimes on Investor Perceptions and Behavior. *Journal of Management Accounting Research*, 32(1), 11–29.

- Bradshaw, M. T., & Sloan, R. G. (2002). GAAP versus The Street: An Empirical Assessment of Two Alternative Definitions of Earnings. *Journal of Accounting Research*, 40(1), 41–66.
- Brown, J. A., Anderson, A., Salas, J. M., & Ward, A. J. (2017). Do Investors Care About Director Tenure? Insights from Executive Cognition and Social Capital Theories. *Organization Science*, 28(3), 471–494.
- Brown, L. D., & Sivakumar, K. (2003). Comparing the Value Relevance of Two Operating Income Measures. *Review of Accounting Studies*, 8(4), 561–572.
- Brunarski, K. R., Campbell, T. C., & Harman, Y. S. (2015). Evidence on the outcome of Say-On-Pay votes: How managers, directors, and shareholders respond. *Journal of Corporate Finance*, 30, 132–149.
- Burns, N., & Minnick, K. (2013). Does Say-on-Pay Matter? Evidence from Say-on-Pay Proposals in the United States. *Financial Review*, 48(2), 233–258.
- Butters, J. (2016, March 11). *Did DJIA Companies Report Higher Non-GAAP EPS in FY 2015?* [FACTSET Earnings Insight].
- Byrd, J., Cooperman, E. S., & Wolfe, G. A. (2010). Director tenure and the compensation of bank CEOs. *Managerial Finance*, 36(2), 86–102.
- Cai, J., & Walkling, R. A. (2011). Shareholders' Say on Pay: Does It Create Value? *The Journal of Financial and Quantitative Analysis*, 46(2), 299–339.
- Carter, M. E., & Zamora, V. L. (2007). *Shareholder remuneration votes and CEO compensation design*. AAA 2008 MAS Meeting Paper.
- Chen, J. V., Gee, K. H., & Neilson, J. J. (2021). Disclosure Prominence and the Quality of Non-GAAP Earnings. *Journal of Accounting Research*, 59(1), 163–213.
- Chen, L., Krishnan, G., & Pevzner, M. (2012). Pro forma disclosures, audit fees, and auditor resignations. *Journal of Accounting and Public Policy*, 31(3), 237–257.
- Cheng, Y. (2017). Managerial Reputation and the Quality of Non-GAAP Earnings Disclosures. *Journal of Accounting and Finance*, 17(2).
- Choi, Y.-S., & Young, S. (2015). Transitory earnings components and the two faces of non-generally accepted accounting principles earnings. *Accounting & Finance*, 55(1), 75–103.
- Christensen, T. E., Drake, M. S., & Thornock, J. R. (2014). Optimistic Reporting and Pessimistic Investing: Do Pro Forma Earnings Disclosures Attract Short Sellers? *Contemporary Accounting Research*, 31(1), 67–102.

- Christensen, T. E., Merkley, K. J., Tucker, J. W., & Venkataraman, S. (2011). Do managers use earnings guidance to influence street earnings exclusions? *Review of Accounting Studies*, 3(16), 501–527.
- Christensen, T. E., Pei, H., Pierce, S. R., & Tan, L. (2019). Non-GAAP reporting following debt covenant violations. *Review of Accounting Studies*, 24(2), 629–664.
- Clements, C. E., Jessup, R. K., Neill, J. D., & Wertheim, P. (2018). The relationship between director tenure and director quality. *International Journal of Disclosure and Governance*, 15(3), 142–161.
- Collins, D., Marquardt, B. B., & Niu, X. (2019). Equity-based incentives and shareholder say-on-pay. *Journal of Business Finance & Accounting*, 46(5–6), 739–761.
- Canyon, M. J. (2016). *Shareholder Dissent on Say-on-Pay and CEO Compensation*. (SSRN Scholarly Paper ID 2748645). Social Science Research Network. <https://doi.org/10.2139/ssrn.2748645>.
- Canyon, M., & Sadler, G. (2010). Shareholder Voting and Directors' Remuneration Report Legislation: Say on Pay in the UK. *Corporate Governance: An International Review*, 18(4), 296–312.
- Core, J. E., Guay, W., & Larcker, D. F. (2008). The power of the pen and executive compensation. *Journal of Financial Economics*, 88(1), 1–25.
- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, 51(3), 371–406.
- Cormier, D., Demaria, S., & Magnan, M. (2017). Beyond earnings: Do EBITDA reporting and governance matter for market participants? *Managerial Finance*, 43(2), 193–211.
- Cormier, D., Lapointe-Antunes, P., & Magnan, M. (2011). Revisiting the Relevance and Reliability of Non-GAAP Reporting: The Case of the Income Trusts*. *Contemporary Accounting Research*, 28(5), 1585–1609.
- 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.
- Creary, S. J., McDonnell, M.-H. (“Mae”), Ghai, S., & Scruggs, J. (2019, March 27). When and Why Diversity Improves Your Board's Performance. *Harvard Business Review*. <https://hbr.org/2019/03/when-and-why-diversity-improves-your-boards-performance>
- Cullinan, C. P., Mahoney, L., & Roush, P. B. (2017). Are CSR activities associated with shareholder voting in director elections and say-on-pay votes? *Journal of Contemporary Accounting & Economics*, 13(3), 225–243.

- Cuñat, V., Giné, M., & Guadalupe, M. (2016). Say Pays! Shareholder Voice and Firm Performance*. *Review of Finance*, 20(5), 1799–1834.
- Curtis, A. B., McVay, S. E., & Whipple, B. C. (2013). The Disclosure of Non-GAAP Earnings Information in the Presence of Transitory Gains. *The Accounting Review*, 89(3), 933–958.
- Curtis, A., Li, V., & Patrick, P. H. (2021). The use of adjusted earnings in performance evaluation. *Review of Accounting Studies*.
- Daily, C. M., Johnson, J. L., Ellstrand, A. E., & Dalton, D. R. (1998). Compensation Committee Composition as a Determinant of CEO Compensation. *Academy of Management Journal*, 41(2), 209–220.
- de Villiers, C., Naiker, V., & van Staden, C. J. (2011). The Effect of Board Characteristics on Firm Environmental Performance. *Journal of Management*, 37(6), 1636–1663.
- Del Guercio, D., Seery, L., & Woidtke, T. (2008). Do boards pay attention when institutional investor activists “just vote no”? *Journal of Financial Economics*, 90(1), 84–103.
- Doyle, J. T., Jennings, J. N., & Soliman, M. T. (2013). Do managers define non-GAAP earnings to meet or beat analyst forecasts? *Journal of Accounting and Economics*, 56(1), 40–56.
- Doyle, J. T., Lundholm, R. J., & Soliman, M. T. (2003). The Predictive Value of Expenses Excluded from Pro Forma Earnings. *Review of Accounting Studies*, 8(2), 145–174.
- Ertimur, Y., Ferri, F., & Oesch, D. (2013). Shareholder votes and proxy advisors: Evidence from say on pay. *Journal of Accounting Research*, 51(5), 951–996.
- Faleye, O. (2011). Ceo Directors, Executive Incentives, and Corporate Strategic Initiatives. *Journal of Financial Research*, 34(2), 241–277.
- Ferri, F., & Maber, D. A. (2013). Say on Pay Votes and CEO Compensation: Evidence from the UK*. *Review of Finance*, 17(2), 527–563.
- 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.
- Ferris, S. P., Jagannathan, M., & Pritchard, A. C. (2003). Too Busy to Mind the Business? Monitoring by Directors with Multiple Board Appointments. *The Journal of Finance*, 58(3), 1087–1111.
- Fich, E. M. (2005). Are Some Outside Directors Better than Others? Evidence from Director Appointments by Fortune 1000 Firms. *The Journal of Business*, 78(5), 1943–1972.

- Forbes, D. P., & Milliken, F. J. (1999). Cognition and Corporate Governance: Understanding Boards of Directors as Strategic Decision-Making Groups. *Academy of Management Review*, 24(3), 489–505.
- Frankel, R., McVay, S., & Soliman, M. (2011). Non-GAAP earnings and board independence. *Review of Accounting Studies*, 16(4), 719–744.
- Friday, S., & Sirmans, S. (1998). Board of Director Monitoring and Firm Value in REITs. *Journal of Real Estate Research*, 16(3), 411–428.
- Gregory-Smith, I., Thompson, S., & Wright, P. W. (2014). CEO Pay and Voting Dissent Before and After the Crisis. *The Economic Journal*, 124(574), F22–F39.
- Grosse, M., Kean, S., & Scott, T. (2017). Shareholder say on pay and CEO compensation: Three strikes and the board is out. *Accounting and Finance*, 57(3), 701–725.
- Guest, N. M., Kothari, S. P., & Pozen, R. (2021). *Why Do Large Positive Non-GAAP Earnings Adjustments Predict Abnormally High CEO Pay?* (SSRN Scholarly Paper ID 3030953). Social Science Research Network. <https://doi.org/10.2139/ssrn.3030953>
- Hadley, B. (2017). Determinants of disclosures of alternative pay measures and their role in Say on Pay approval. *Managerial Finance*, 43(2), 263–280.
- Hahn, P. D., & Lasfer, M. (2016). Impact of foreign directors on board meeting frequency. *International Review of Financial Analysis*, 46, 295–308.
- Hallas, N., & Usvyatsky, O. (2018, October 16). *Trends in SEC Non-GAAP Comment Letters 2016-2018*. Audit Analytics. <https://blog.auditanalytics.com/trends-in-sec-non-gaap-comment-letters-2016-2018/>
- Heflin, F., & Hsu, C. (2008). The impact of the SEC's regulation of non-GAAP disclosures. *Journal of Accounting and Economics*, 46(2), 349–365.
- Hemmings, D., Hodgkinson, L., & Williams, G. (2020). It's OK to pay well, if you write well: The effects of remuneration disclosure readability. *Journal of Business Finance & Accounting*, 47(5–6), 547–586.
- Hentschel, L., & Kothari, S. P. (2001). Are Corporations Reducing or Taking Risks with Derivatives? *The Journal of Financial and Quantitative Analysis*, 36(1), 93–118.
- Hermanson, D. R., Tompkins, J. G., Veliyath, R., & Ye, Z. (2012). The compensation committee process. *Contemporary Accounting Research*, 29(3), 666–709.
- Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28(3), 383–396.

- Hitz, J.-M., & Müller-Bloch, S. (2015). Market Reactions to the Regulation of Executive Compensation. *European Accounting Review*, 24(4), 659–684.
- Ho, S. (2019, December 18). *SEC Official Signals No Rulemaking on Non-GAAP Measures for CEO Pay*. Thomson Reuters Tax & Accounting News. <https://tax.thomsonreuters.com/news/sec-official-signals-no-rulemaking-on-non-gaap-measures-for-ceo-pay/>
- Hooghiemstra, R., Kuang, Y. F., & Qin, B. (2017). Does obfuscating excessive CEO pay work? The influence of remuneration report readability on say-on-pay votes. *Accounting and Business Research*, 47(6), 695–729.
- Hsu, H.-W., Liu-Ching Tsai, Chaur-Shiuh Young, & Chen, C.-H. (2018). The relationship between compensation committee quality and the voluntary adoption of clawback provisions. *Investment Management and Financial Innovations*, 15(4), 345–355.
- Iliev, P., & Vitanova, S. (2019). The Effect of the Say-on-Pay Vote in the United States. *Management Science*, 65(10), 4505–4521.
- Isidro, H., & Marques, A. (2013). The Effects of Compensation and Board Quality on Non-GAAP Disclosures in Europe. *The International Journal of Accounting*, 48(3), 289–317.
- Isidro, H., & Marques, A. (2015). The Role of Institutional and Economic Factors in the Strategic Use of Non-GAAP Disclosures to Beat Earnings Benchmarks. *European Accounting Review*, 24(1), 95–128.
- Jackson Jr., R. J., & Pozen, R. C. (2019, April 10). Executive Pay Needs a Transparent Scorecard. *Wall Street Journal*. <https://www.wsj.com/articles/executive-pay-needs-a-transparent-scorecard-11554936540>
- Jacobius, A. (2020, October 12). *CalPERS gets tougher on companies over compensation*. Pensions & Investments. <https://www.pionline.com/governance/calpers-gets-tougher-companies-over-compensation>
- Jennings, R., & Marques, A. (2011). The Joint Effects of Corporate Governance and Regulation on the Disclosure of Manager-Adjusted Non-GAAP Earnings in the US. *Journal of Business Finance & Accounting*, 38(3–4), 364–394.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Johnson, W. B., & Schwartz, W. C. (2005). Are Investors Misled by “Pro Forma” Earnings?*. *Contemporary Accounting Research*, 22(4), 915–963.
- Kaplan, S., & Zamora, V. L. (2018). The Effects of Current Income Attributes on Nonprofessional Investors’ Say-on-Pay Judgments: Does Fairness Still Matter? *Journal of Business Ethics*, 153(2), 407–425.

- Kaplan, S., Samuels, J., & Cohen, J. (2015). An Examination of the Effect of CEO Social Ties and CEO Reputation on Nonprofessional Investors' Say-on-Pay Judgments. *Journal of Business Ethics*, 126(1), 103–117.
- Katz, D., & McIntosh, L. (2019, February 7). SEC Scrutiny of Non-GAAP Financial Measures. *The Harvard Law School Forum on Corporate Governance*. <https://corpgov.law.harvard.edu/2019/02/07/sec-scrutiny-of-non-gaap-financial-measures/>
- Kelton, A. S., & Pennington, R. R. (2020). If You Tweet, They Will Follow: CEO Tweets, Social Capital, and Investor Say-on-Pay Judgments. *Journal of Information Systems*, 34(1), 105–122.
- Kent, P., Kercher, K., & Routledge, J. (2018). Remuneration committees, shareholder dissent on CEO pay and the CEO pay–performance link. *Accounting & Finance*, 58(2), 445–475.
- Kimbrow, M. B., & Xu, D. (2016). Shareholders have a say in executive compensation: Evidence from say-on-pay in the United States. *Journal of Accounting and Public Policy*, 35(1), 19–42.
- Kolev, K., Marquardt, C. A., & McVay, S. E. (2008). SEC Scrutiny and the Evolution of Non-GAAP Reporting. *The Accounting Review*, 83(1), 157–184.
- Krause, R., Whitler, K. A., & Semadeni, M. (2014). Power to the principals! An experimental look at shareholder say-on-pay voting. *Academy of Management Journal*, 57(1), 94–115.
- Kyung, H., Lee, H., & Marquardt, C. (2019). The effect of voluntary clawback adoption on non-GAAP reporting. *Journal of Accounting and Economics*, 67(1), 175–201.
- Laksmana, I. (2008). Corporate Board Governance and Voluntary Disclosure of Executive Compensation Practices. *Contemporary Accounting Research*, 25(4), 1147–1182.
- Lambert, R. A., Larcker, D. F., & Weigelt, K. (1993). The Structure of Organizational Incentives. *Administrative Science Quarterly*, 38(3), 438–461.
- Larcker, D. F., McCall, A. L., & Ormazabal, G. (2015). Outsourcing Shareholder Voting to Proxy Advisory Firms. *The Journal of Law and Economics*, 58(1), 173–204.
- Leung, E., & Veenman, D. (2018). Non-GAAP Earnings Disclosure in Loss Firms. *Journal of Accounting Research*, 56(4), 1083–1137.
- Li, H., & Qian, Y. (2011). Outside CEO directors on compensation committees: Whose side are they on? *Review of Accounting and Finance*, 10(2), 110–133.
- Liang, Y., Moroney, R., & Rankin, M. (2020). Say-on-pay judgements: The two-strikes rule and the pay-performance link. *Accounting & Finance*, 60(S1), 943–970.

- Liu, R. (2020). Can compensation committees effectively mitigate the CEO horizon problem? The role of co-opted directors. *Accounting Research Journal*, 34(1), 1–21.
- Lougee, B. A., & Marquardt, C. A. (2004). Earnings Informativeness and Strategic Disclosure: An Empirical Examination of “Pro Forma” Earnings. *The Accounting Review*, 79(3), 769–795.
- Lozano-Reina, G., & Sánchez-Marín, G. (2020). Say on pay and executive compensation: A systematic review and suggestions for developing the field. *Human Resource Management Review*, 30(2), 100683.
- Main, B. G. M., O'Reilly, C. A., & Wade, J. (1995). The CEO, the Board of Directors and Executive Compensation: Economic and Psychological Perspectives. *Industrial and Corporate Change*, 4(2), 293–332.
- Mangen, C., & Magnan, M. (2012). “Say on Pay”: A Wolf in Sheep’s Clothing? *Academy of Management Perspectives*, 26(2), 86–104.
- Marques, A. (2010). Disclosure strategies among S&P 500 firms: Evidence on the disclosure of non-GAAP financial measures and financial statements in earnings press releases. *The British Accounting Review*, 42(2), 119–131.
- McKeon, J. (2018, October 10). *Long-Term Trends in Non-GAAP Disclosures: A Three-Year Overview*. Audit Analytics. <https://blog.auditanalytics.com/long-term-trends-in-non-gaap-disclosures-a-three-year-overview/>
- Mishel, L., & Wolfe, J. (2019, August 14). CEO compensation has grown 940% since 1978: Typical worker compensation has risen only 12% during that time. *Economic Policy Institute*. <https://www.epi.org/publication/ceo-compensation-2018/>
- Monem, R., & Ng, C. (2013). Australia’s ‘two-strikes’ rule and the pay-performance link: Are shareholders judicious? *Journal of Contemporary Accounting & Economics*, 9(2), 237–254.
- Norman, C. S., Rose, A. M., Rose, J. M., & Suh, I. (2020). An investigation of corporate directors’ responses to CEO pay ratio disclosures and say-on-pay votes. *Human Resource Management*.
- Obermann, J. (2020). Let’s talk about money! Assessing the link between firm performance and voluntary Say-on-Pay votes. *Journal of Business Economics*, 90(1), 109–135.
- Obermann, J., & Velte, P. (2018). Determinants and consequences of executive compensation-related shareholder activism and say-on-pay votes: A literature review and research agenda. *Journal of Accounting Literature*, 40, 116–151.
- Reda, J. F., Reifler, S., Thatcher, L. G., & Lochner, P. R. (2014). Front Matter. In *The Compensation Committee Handbook* (pp. i–xx). John Wiley & Sons, Ltd.

- Regulation G. (2002, November 20). *Proposed Rule: Conditions for Use of Non-GAAP Financial Measures; Release No. 33-8145*. <https://www.sec.gov/rules/proposed/33-8145.htm>
- Sanchez-Marin, G., Lozano-Reina, G., Baixauli-Soler, J. S., & Lucas-Perez, M. E. (2017). Say on pay effectiveness, corporate governance mechanisms, and CEO compensation alignment. *BRQ Business Research Quarterly*, 20(4), 226–239.
- Saona, P., Muro, L., & Alvarado, M. (2020). How do the ownership structure and board of directors' features impact earnings management? The Spanish case. *Journal of International Financial Management & Accounting*, 31(1), 98–133.
- Shehata, N. F. (2014). *Theories and Determinants of Voluntary Disclosure* (SSRN Scholarly Paper ID 2442486). Social Science Research Network. <https://papers.ssrn.com/abstract=2442486>
- Shivdasani, A., & Yermack, D. (1999). CEO Involvement in the Selection of New Board Members: An Empirical Analysis. *The Journal of Finance*, 54(5), 1829–1853.
- Stathopoulos, K., & Voulgaris, G. (2016). The Importance of Shareholder Activism: The Case of Say-on-Pay. *Corporate Governance: An International Review*, 24(3), 359–370.
- Sun, J., & Cahan, S. (2009). The effect of compensation committee quality on the association between CEO cash compensation and accounting performance. *Corporate Governance: An International Review*, 17(2), 193–207.
- Sun, J., Cahan, S. F., & Emanuel, D. (2009). Compensation committee governance quality, chief executive officer stock option grants, and future firm performance. *Journal of Banking & Finance*, 33(8), 1507–1519.
- The Dodd-Frank Act. (2010, July 21). *DODD-FRANK WALL STREET REFORM AND CONSUMER PROTECTION ACT*. <https://www.govinfo.gov/content/pkg/PLAW-111publ203/html/PLAW-111publ203.htm>
- Usvyatsky, O. (2019, June 11). *Pros and Cons of Using Non-GAAP Metrics for Executive Compensation, Including ESG Considerations*. Audit Analytics. <https://blog.auditanalytics.com/pros-and-cons-of-using-non-gaap-metrics-for-executive-compensation-including-esg-considerations/>
- Vafeas, N. (2003). Length of Board Tenure and Outside Director Independence. *Journal of Business Finance & Accounting*, 30(7–8), 1043–1064.
- Webber, S. J., Nichols, N. B., Street, D. L., & Cereola, S. J. (2013). Non-GAAP adjustments to net income appearing in the earnings releases of the S&P 100: An analysis of frequency of occurrence, materiality and rationale. *Research in Accounting Regulation*, 25(2), 236–251.
- Yang, J. S., & Krishnan, J. (2005). Audit Committees and Quarterly Earnings Management. *International Journal of Auditing*, 9(3), 201–219.

Appendix

Table 1 Variable definition

Variable	Description
<i>NG</i>	Indicator variable, equal to 1 if the absolute value of the difference between GAAP and I/B/E/S actual earnings is non-zero, and 0 otherwise
<i>TOTAL_EXCLUSIONS</i>	Non-GAAP earnings per share less GAAP earnings per share – from Compustat & I/B/E/S
<i>SPECIAL_ITEMS</i>	Earnings per share from operations less GAAP earnings per share scaled by total assets per share – from Compustat
<i>OTHER_EXCLUSIONS</i>	Total exclusions less special items scaled by total assets per share;
<i>SOP</i>	Indicator variable, equal to 1 for post-mandate of Say-on-Pay, and 0 otherwise
<i>SOP_YEAR</i>	Indicator variable, equal to 1 if the firm is subject to a subsequent Say-on-Pay vote, and 0 otherwise
<i>SUPPORT</i>	Log of the percentage of votes approving executive compensation relative to the total number of votes – from Proxy Monitor
<i>HIGH_SUPPORT</i>	Indicator variable, equal to 1 if the support rate of Say-on-Pay is higher than 70 percent, and 0 otherwise
<i>CCQ</i>	Sum of quality scores of the individual attributes of the compensation committee
<i>CCQ₂</i>	First component of the principal component analysis of the compensation committee attributes
<i>CCQ'</i>	Fitted value from the first stage regression representing compensation committee quality (Eq. 4)
<i>CCQRANK</i>	Rank variable of compensation committee quality, equal to 0 if CCQ is equal to 0. It is equal to 1 if CCQ is below the median and is equal to 2 if CCQ is above the median.
<i>INTERDEPENDENT</i>	Percentage of directors on the compensation committee appointed during the tenure of an incumbent CEO – from BoardEx
<i>DTENURE</i>	Percentage of directors on the compensation committee with 10 or more years of board service time – from BoardEx

<i>CEO_DIR</i>	Percentage of directors on the compensation committee who are CEOs of other firms at the same time – from BoardEx
<i>DSHARES</i>	Percentage of shares held by directors on the compensation committee – from BoardEx
<i>DIRECTORSHIPS</i>	Percentage of directors on the compensation committee who serve on three or more boards – from BoardEx
<i>CC_SIZE</i>	Number of directors holding seats on the compensation committee – from BoardEx
<i>TCOMP</i>	Log of total CEO compensation, including salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), long-term incentive payouts, and all other total – from Execucomp
<i>COMP_GROWTH</i>	Percentage of growth in CEO compensation – from Execucomp
<i>EXCESSCOMP</i>	Error term from the model of equation 3
<i>SIZE</i>	Log of total assets – from Compustat
<i>ROA</i>	Income before extraordinary items deflated by lagged value of assets – from Compustat
<i>BTM</i>	Book value of assets divided by the sum of the book value of liabilities and the market value of equity - from Compustat
<i>lnMB</i>	Log of the sum of the book value of liabilities and the market value of equity divided by the book value of assets - Compustat
<i>LOSS_CONVERT</i>	An indicator variable, equal to 1 if GAAP earnings per share is negative and non-GAAP earnings per share is positive.
<i>RETURN</i>	Stock price return of the year – from Thomson Datastream
<i>SALES</i>	Log of total sales – from Compustat
<i>LOSS</i>	Indicator variable, equal to 1 for negative GAAP earnings, and 0 otherwise;
<i>BSIZE</i>	Total number of directors on the board – from BoardEx
<i>BINDEP</i>	Percentage of external directors on the board – from BoardEx

<i>TOP5INSTOWN</i>	Percentage of firm's equity held by largest 5 institutions – from Thomson Reuters
<i>TENURE</i>	Log of the number of years an individual had been the CEO of a given company - from Execucomp
<i>CEOOWN</i>	Percentage of shares owned by the CEO – from Execucomp
<i>INSTOWN</i>	Percentage of shares owned by institutional investors – from Thomson Reuters

Table 2 Essay 1 - Descriptive statistics of variables

Variable	N	Mean	Std. Dev.	25th percentile	Median	75th percentile
<i>NG</i>	2,892	0.7849	0.4109	1	1	1
<i>SOP</i>	2,892	0.5532	0.4972	0	1	1
<i>SOP_YEAR</i>	2,892	0.6369	0.4809	0	1	1
<i>EPS_NONGAAP</i>	2,892	3.6069	2.5649	2.02	3.14	4.61
<i>EPS_GAAP</i>	2,892	3.0861	3.2235	1.62	2.815	4.45
<i>TOTAL_EXCLUSIONS</i>	2,892	0.5490	1.7671	0	0.08	0.6
<i>SPECIAL_ITEMS</i>	2,892	0.3660	1.3359	0	0.03	0.35
<i>OTHER_EXCLUSIONS</i>	2,892	0.1697	0.7970	-0.01	0	0.16
<i>EXCESSCOMP</i>	2,892	0.0049	0.7400	-0.2302	0.1124	0.38272
<i>TCOMP</i>	2,892	16.1048	0.7601	15.7805	16.1880	16.5508
<i>COMP_GROWTH</i>	2,892	23.5422	84.3732	-10.661	5.7185	28.91
<i>LOSS</i>	2,892	0.0757	0.2646	0	0	0
<i>SIZE</i>	2,892	24.0604	1.2588	23.2182	23.9925	24.6765
<i>ROA</i>	2,892	0.0632	0.0692	0.0267	0.0545	0.0929
<i>RETURN</i>	2,892	0.1414	1.5355	-0.0870	0.0815	0.2516
<i>BSIZE</i>	2,892	11.44606	2.04283	10	11	13
<i>BINDEP</i>	2,892	0.88271	0.05831	0.85714	0.9	0.91667
<i>TOP5INSTOWN</i>	2,892	0.25701	0.08545	0.20854	0.25402	0.30327
<i>TENURE</i>	2,892	1.73451	0.76368	1.09861	1.79176	2.302585

Table 3 Essay 1 - Correlations between variables (Lower Pearson's correlation, upper Spearman's correlation)

	<i>SOP</i>	<i>SOP_YEAR</i>	<i>NG</i>	<i>OTHER_ EXCLUSIONS</i>	<i>SPECIAL_ ITEMS</i>	<i>EXCESSCOMP</i>	<i>TCOMP</i>	<i>LOSS</i>	<i>SIZE</i>	<i>ROA</i>
<i>SOP</i>	1	0.6577 (0.00)	0.1412 (0.00)	0.1075 (0.00)	0.1492 (0.00)	0.0728 (0.00)	0.1117 (0.00)	0.0420 (0.02)	0.2121 (0.00)	0.0437 (0.00)
<i>SOP_YEAR</i>	0.7005 (0.00)	1	0.0921 (0.00)	0.0836 (0.00)	0.1247 (0.00)	0.1414 (0.00)	0.2018 (0.00)	0.0226 (0.21)	0.2221 (0.00)	-0.0748 (0.00)
<i>NG</i>	0.1291 (0.00)	0.0799 (0.00)	1	0.1652 (0.00)	0.3190 (0.00)	0.1058 (0.00)	0.0947 (0.00)	0.0899 (0.00)	0.0946 (0.00)	-0.1562 (0.00)
<i>OTHER_ EXCLUSIONS</i>	0.0994 (0.00)	0.0855 (0.00)	0.0991 (0.00)	1	0.0415 (0.02)	0.0849 (0.00)	0.0819 (0.00)	0.1195 (0.00)	0.0906 (0.00)	-0.1153 (0.00)
<i>SPECIAL_ ITEMS</i>	0.0566 (0.00)	0.0466 (0.00)	0.1364 (0.00)	0.1117 (0.00)	1	0.0795 (0.00)	0.0192 (0.29)	0.2877 (0.00)	0.0060 (0.74)	-0.3308 (0.00)
<i>EXCESSCOMP</i>	0.0763 (0.00)	0.1373 (0.00)	0.1342 (0.00)	0.0645 (0.00)	-0.0001 (0.99)	1	0.8465 (0.00)	0.0157 (0.39)	0.2157 (0.00)	-0.0448 (0.01)
<i>TCOMP</i>	0.1251 (0.00)	0.2105 (0.00)	0.0662 (0.00)	0.0080 (0.62)	-0.0469 (0.00)	0.9250 (0.00)	1	-0.1077 (0.00)	0.4195 (0.00)	0.1269 (0.00)
<i>LOSS</i>	0.0241 (0.13)	0.0135 (0.39)	0.1017 (0.00)	0.3097 (0.00)	0.4820 (0.00)	-0.0190 (0.30)	-0.1051 (0.00)	1	-0.0756 (0.00)	-0.4643 (0.00)
<i>SIZE</i>	0.1470 (0.00)	0.2054 (0.00)	0.0478 (0.00)	-0.0448 (0.00)	0.0033 (0.83)	0.1192 (0.00)	0.2938 (0.00)	-0.1052 (0.00)	1	-0.2058 (0.00)
<i>ROA</i>	-0.0001 (0.99)	0.0033 (0.84)	-0.0550 (0.00)	-0.1247 (0.00)	-0.1078 (0.00)	-0.0723 (0.00)	0.0486 (0.00)	-0.2183 (0.00)	0.1300 (0.00)	1
<i>RETURN</i>	-0.0293 (0.07)	-0.0178 (0.26)	-0.0046 (0.77)	-0.0223 (0.16)	-0.0115 (0.47)	-0.0082 (0.65)	-0.0073 (0.65)	-0.0096 (0.55)	-0.0412 (0.01)	0.0098 (0.55)
<i>BSIZE</i>	-0.0125 (0.44)	0.0515 (0.00)	0.0118 (0.46)	-0.0407 (0.01)	-0.0101 (0.53)	0.1532 (0.00)	0.2312 (0.00)	-0.0678 (0.00)	0.4501 (0.00)	-0.0747 (0.00)
<i>BINDEP</i>	0.1085 (0.00)	0.1697 (0.00)	0.0865 (0.00)	-0.0235 (0.14)	0.0465 (0.00)	0.1736 (0.00)	0.1701 (0.00)	0.0845 (0.00)	0.1776 (0.00)	-0.1632 (0.00)
<i>TOP5INSTOWN</i>	0.0800 (0.00)	0.0306 (0.05)	0.0036 (0.82)	0.0065 (0.68)	0.1053 (0.00)	0.0380 (0.03)	-0.0587 (0.00)	0.1330 (0.00)	-0.2112 (0.00)	0.0022 (0.89)
<i>TENURE</i>	0.0400 (0.01)	0.0370 (0.02)	-0.0026 (0.87)	-0.0108 (0.51)	-0.0143 (0.38)	-0.0175 (0.34)	0.0439 (0.00)	-0.0810 (0.00)	-0.0289 (0.07)	0.0436 (0.01)

Table 3 (Cont'd) Essay 1 - Correlations between variables (Lower Pearson's correlation, upper Spearman's correlation)

	<i>RETURN</i>	<i>BSIZE</i>	<i>BINDEP</i>	<i>TOP5INSTOWN</i>	<i>TENURE</i>
<i>SOP</i>	0.1130 (0.00)	-0.0183 (0.00)	-0.1992 (0.00)	-0.1658 (0.00)	-0.0473 (0.00)
<i>SOP_YEAR</i>	0.0901 (0.00)	0.0902 (0.00)	0.1939 (0.00)	0.0674 (0.00)	0.0276 (0.13)
<i>NG</i>	0.0033 (0.85)	0.0091 (0.62)	0.1168 (0.00)	0.0327 (0.07)	0.0080 (0.66)
<i>OTHER_EXCLUSIONS</i>	-0.0264 (0.15)	-0.0167 (0.36)	0.0355 (0.07)	0.0114 (0.53)	0.0028 (0.88)
<i>SPECIAL_ITEMS</i>	-0.0545 (0.00)	0.0387 (0.03)	0.0962 (0.00)	0.0714 (0.00)	-0.0138 (0.45)
<i>EXCESSCOMP</i>	0.0194 (0.29)	0.1458 (0.00)	0.1538 (0.00)	0.0117 (0.52)	0.0072 (0.69)
<i>TCOMP</i>	0.0325 (0.07)	0.2452 (0.00)	0.1829 (0.00)	-0.1294 (0.00)	0.0772 (0.00)
<i>LOSS</i>	-0.0985 (0.00)	-0.0706 (0.00)	0.0024 (0.89)	0.1496 (0.00)	-0.0648 (0.00)
<i>SIZE</i>	0.0139 (0.45)	0.4305 (0.00)	0.3136 (0.00)	-0.3513 (0.00)	-0.0434 (0.01)
<i>ROA</i>	0.0529 (0.00)	-0.0677 (0.00)	-0.1458 (0.00)	-0.1812 (0.00)	0.0103 (0.57)
<i>RETURN</i>	1	-0.0277 (0.13)	0.0051 (0.78)	-0.0034 (0.85)	0.0239 (0.19)
<i>BSIZE</i>	-0.0316 (0.05)	1	0.4578 (0.00)	-0.2150 (0.00)	-0.0335 (0.07)
<i>BINDEP</i>	-0.0052 (0.75)	0.1478 (0.00)	1	-0.0293 (0.11)	-0.1009 (0.00)
<i>TOP5INSTOWN</i>	0.0472 (0.00)	-0.2371 (0.00)	0.0572 (0.00)	1	0.0027 (0.88)
<i>TENURE</i>	-0.0066 (0.68)	-0.0255 (0.12)	-0.1075 (0.00)	-0.0026 (0.87)	1

p-values in parentheses

Table 4 Summary statistics of the likelihood of non-GAAP reporting differentiating between pre- and post-Say-on-Pay mandate

	Pre- 2011	Post- 2011	t-test
	Mean	Mean	p-value
<i>Prob(NG = 1)</i>	0.72059 (n = 1,292)	0.83688 (n = 1,600)	0.00

Table 5 Summary statistics of the likelihood of non-GAAP reporting differentiating between the firm being subject to a Say-on-Pay vote and when not

	No-Vote Year	Vote Year	t-test
	Mean	Mean	p-value
<i>Prob(NG = 1)</i>	0.73619 (n = 1,050)	0.81270 (n = 1,842)	0.00

Table 6 Results of logistic regression of *SOP* and *SOP_YEAR* on the likelihood of non-GAAP reporting

	<i>Pr</i> (<i>NG</i> =1) (Hypothesis 1a)	<i>Pr</i> (<i>NG</i> =1) (Hypothesis 2a)
<i>SOP</i>	4.74350*** (5.93)	
<i>SOP_YEAR</i>		0.27573*** (2.76)
<i>EXCESSCOMP</i>	1.17378** (2.05)	0.32090 (1.47)
<i>TCOMP</i>	-0.93547 (-1.63)	0.05193 (0.23)
<i>COMP_GROWTH</i>	-0.00082 (-1.13)	-0.00139*** (-2.64)
<i>LOSS</i>	0.44417 (1.19)	0.60854** (2.28)
<i>SIZE</i>	0.09206 (0.67)	-0.01515 (-0.28)
<i>ROA</i>	-5.19336*** (-3.05)	-4.26651*** (-4.85)
<i>RETURN</i>	-0.01194 (-0.34)	-0.01963 (-0.77)
<i>BSIZE</i>	-0.00612 (-0.13)	-0.03711 (-1.44)
<i>BINDEP</i>	3.21841** (2.14)	2.67288*** (3.22)
<i>TOP5INSTOWN</i>	-2.33975** (-2.14)	-1.11968* (-1.83)
<i>TENURE</i>	0.28716*** (2.73)	0.08330 (1.31)
Constant	12.40025 (1.59)	-0.80335 (-0.26)
Year Control	Yes	Yes
Observations	2,892	2,892
Log likelihood	-1,124	-1,432
χ^2	137.24	146.95

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7 Results of regression of *SOP* and *SOP_YEAR* on the quality of non-GAAP reporting

	<i>OTHER_EXCLUSIONS</i> (Hypothesis 1b)	<i>OTHER_EXCLUSIONS</i> (Hypothesis 2b)
<i>SOP</i>	0.12946*** (4.65)	
<i>SOP_YEAR</i>		0.09576*** (3.27)
<i>EXCESSCOMP</i>	-0.02364 (-0.35)	-0.02883 (-0.43)
<i>TCOMP</i>	0.09672 (1.41)	0.10041 (1.45)
<i>COMP_GROWTH</i>	0.00001 (0.08)	-0.00002 (-0.09)
<i>LOSS</i>	0.71941*** (6.30)	0.71722*** (6.26)
<i>SIZE</i>	0.02867 (1.56)	0.02990 (1.62)
<i>ROA</i>	-1.43281*** (-3.16)	-1.47608*** (-3.24)
<i>RETURN</i>	-0.02615* (-1.75)	-0.02714* (-1.89)
<i>BSIZE</i>	-0.02136*** (-2.68)	-0.02302*** (-2.89)
<i>BINDEP</i>	-0.92243*** (-3.00)	-0.93241*** (-3.03)
<i>TOP5INSTOWN</i>	-0.23624 (-1.13)	-0.17983 (-0.86)
<i>TENURE</i>	0.01058 (0.48)	0.00967 (0.44)
Constant	-1.00849 (-1.11)	-1.06847 (-1.16)
Year Control	Yes	Yes
Observations	2,892	2,892
R ²	11.8%	11.5%
Adjusted R ²	11.4%	11.1%

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8 Results of regression of *SOP* and *SOP_YEAR* on the quality of non-GAAP reporting (using *LOSS_CONVERT*)

	<i>LOSS_CONVERT</i>	<i>LOSS_CONVERT</i>
<i>SOP</i>	0.40900** (2.04)	
<i>SOP_YEAR</i>		0.44357** (2.11)
<i>EXCESSCOMP</i>	3.38267*** (7.58)	3.39083*** (7.61)
<i>TCOMP</i>	-3.28373*** (-7.36)	-3.30331*** (-7.40)
<i>COMP_GROWTH</i>	-0.00472** (-2.52)	-0.00486** (-2.57)
<i>SIZE</i>	0.08926 (0.92)	0.08696 (0.89)
<i>RETURN</i>	-0.98523*** (-3.46)	-1.00233*** (-3.50)
<i>BSIZE</i>	-0.05558 (-1.05)	-0.05939 (-1.12)
<i>BINDEP</i>	2.21800 (1.47)	2.16172 (1.42)
<i>TOP5INSTOWN</i>	2.03154* (1.87)	2.12980** (1.97)
<i>TENURE</i>	0.04325 (0.33)	0.03120 (0.24)
Constant	45.19464*** (6.60)	45.60039*** (6.64)
Observations	2,892	2,892
Log likelihood	-461	-461
χ^2	124.97	125.35

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9 Results of regressions of individual CCQ attributes on Say-on-Pay support

	<i>SUPPORT</i>	<i>SUPPORT</i>	<i>SUPPORT</i>	<i>SUPPORT</i>	<i>SUPPORT</i>	<i>SUPPORT</i>
<i>INTERDEPENDENT</i>	-0.07058*** (-3.13)					
<i>DTENURE</i>		0.08254*** (3.46)				
<i>CEO_DIR</i>			-0.19077*** (-5.82)			
<i>DSHARES</i>				-0.00097 (-0.11)		
<i>DIRECTORSHIPS</i>					-0.07254** (-2.31)	
<i>CC_SIZE</i>						-0.01154** (-2.05)
<i>EXCESSCOMP</i>	-0.05164*** (-4.21)	-0.05242*** (-4.27)	-0.05328*** (-4.37)	-0.04846*** (-3.95)	-0.04784*** (-3.91)	-0.05023*** (-3.75)
<i>TCOMP</i>	0.00463 (0.71)	0.00489 (0.75)	0.00537 (0.83)	0.00355 (0.54)	0.00360 (0.55)	0.00685 (0.99)
<i>ROA</i>	0.09023 (0.73)	0.08170 (0.66)	0.12681 (1.02)	0.09594 (0.77)	0.09558 (0.77)	0.16402 (1.23)
<i>LOSS</i>	-0.02611 (-0.95)	-0.02331 (-0.85)	-0.03033 (-1.10)	-0.02551 (-0.92)	-0.02473 (-0.90)	-0.01138 (-0.41)
<i>TSR</i>	0.06194*** (4.14)	0.06365*** (4.25)	0.06206*** (4.17)	0.06067*** (4.04)	0.06264*** (4.17)	0.06616*** (4.61)

<i>SIZE</i>	-0.03490*** (-4.71)	-0.03437*** (-4.65)	-0.03108*** (-4.23)	-0.03279*** (-4.43)	-0.02902*** (-3.84)	-0.01389 (-1.48)
<i>BSIZE</i>	-0.00555* (-1.75)	-0.00529* (-1.67)	-0.00461 (-1.46)	-0.00560* (-1.76)	-0.00495 (-1.55)	-0.00506 (-1.49)
<i>BINDEP</i>	0.66348*** (5.02)	0.73374*** (5.52)	0.69412*** (5.28)	0.68109*** (5.14)	0.70903*** (5.34)	0.86551*** (5.46)
<i>TENURE</i>	0.01876* (1.91)	-0.00393 (-0.51)	0.00204 (0.27)	-0.00047 (-0.06)	-0.00168 (-0.22)	0.00703 (0.87)
Constant	4.72086*** (20.87)	4.60631*** (20.28)	4.62530*** (20.56)	4.68898*** (20.68)	4.59499*** (20.00)	3.97645*** (13.61)
Industry Control	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,221	2,221	2,221	2,221	2,221	2,221
R ²	9.0%	9.1%	10.0%	8.6%	8.8%	8.6%
Adjusted R ²	6.7%	6.8%	7.7%	6.3%	6.5%	6.3%

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10 Essay 2 - Descriptive statistics of variables

Variable	N	Mean	Std. Dev.	25th percentile	Median	75th percentile
<i>SUPPORT (%)</i>	2,221	86.1014	17.2583	84.65	93.85	96.13
<i>SUPPORT</i>	2,221	4.4227	0.2863	4.4385	4.5417	4.5657
<i>HIGH_SUPPORT</i>	2,221	0.8519	0.3553	1	1	1
<i>CCQ</i>	2,221	2.6952	1.1135	2	3	3
<i>INTERDEPENDENT</i>	2,221	0.3957	0.3548	0	0.33	0.67
<i>DTENURE</i>	2,221	0.4403	0.2669	0.25	0.5	0.67
<i>CEO_DIR</i>	2,221	0.1889	0.1884	0	0.2	0.29
<i>DSHARES</i>	2,221	0.0546	0.8127	0.0011	0.0065	0.0219
<i>DIRECTORSHIPS</i>	2,221	0.6702	0.2134	0.5	0.7	0.83
<i>CC_SIZE</i>	2,221	4.9207	1.3097	4	5	6
<i>OTHER_EXCLUSIONS</i>	2,221	0.1685	0.8983	-0.12	-0.01	0.26
<i>EXCESSCOMP</i>	2,221	0.0989	0.7527	-0.2959	0.1879	0.5874
<i>TCOMP</i>	2,221	16.1459	1.2219	15.917	16.2804	16.606
<i>ROA</i>	2,221	0.0589	0.0665	0.0212	0.0499	0.0862
<i>LOSS</i>	2,221	0.0765	0.2659	0	0	0
<i>TSR</i>	2,221	0.1430	0.3990	-0.0548	0.1194	0.2809
<i>SIZE</i>	2,221	24.3560	1.3039	23.4732	24.2717	25.0076
<i>BSIZE</i>	2,221	11.7096	2.2115	10	12	13
<i>BINDEP</i>	2,221	0.8946	0.0507	0.89	0.91	0.92
<i>TENURE (YEARS)</i>	2,221	7.5214	6.3592	3	6	10
<i>TENURE</i>	2,221	1.7087	0.8179	1.0986	1.7917	2.3026

Table 11 Essay 2 - Correlations between variables (Lower Pearson's correlation, upper Spearman's correlation)

	<i>SUPPORT</i>	<i>CCQ</i>	<i>OTHER EXCLUSIONS</i>	<i>EXCESSCOMP</i>	<i>TCOMP</i>	<i>ROA</i>	<i>LOSS</i>	<i>TSR</i>	<i>SIZE</i>	<i>BSIZE</i>	<i>BINDEP</i>	<i>TENURE</i>
<i>SUPPORT</i>	1	0.0895 (0.00)	-0.0438 (0.03)	-0.1174 (0.00)	-0.2847 (0.00)	0.0836 (0.00)	-0.0769 (0.00)	0.1769 (0.00)	-0.1519 (0.00)	-0.0706 (0.00)	-0.0338 (0.11)	-0.0571 (0.00)
<i>CCQ</i>	0.1074 (0.00)	1	-0.0188 (0.37)	0.0301 (0.15)	-0.0990 (0.00)	0.0477 (0.02)	0.0215 (0.31)	-0.0518 (0.01)	-0.1418 (0.00)	-0.1912 (0.00)	-0.1796 (0.00)	-0.1585 (0.00)
<i>OTHER EXCLUSIONS</i>	-0.0371 (0.08)	0.0309 (0.14)	1	0.0544 (0.01)	0.0096 (0.65)	-0.2103 (0.00)	0.1738 (0.00)	-0.0957 (0.00)	0.0595 (0.00)	-0.0323 (0.12)	0.0504 (0.01)	-0.0077 (0.71)
<i>EXCESSCOMP</i>	-0.0482 (0.02)	0.0265 (0.21)	0.0447 (0.03)	1	0.5186 (0.00)	0.1646 (0.00)	-0.0033 (0.87)	0.0124 (0.55)	-0.2009 (0.00)	-0.0485 (0.02)	0.0500 (0.01)	0.1156 (0.00)
<i>TCOMP</i>	-0.0736 (0.00)	-0.0437 (0.03)	-0.0412 (0.05)	0.5383 (0.00)	1	0.1449 (0.00)	-0.0936 (0.00)	0.0303 (0.15)	0.3917 (0.00)	0.2041 (0.00)	0.1578 (0.00)	0.0931 (0.00)
<i>ROA</i>	0.0571 (0.00)	0.0443 (0.03)	-0.3040 (0.00)	0.0835 (0.00)	-0.0342 (0.10)	1	-0.4527 (0.00)	0.1106 (0.00)	-0.2367 (0.00)	-0.0587 (0.00)	-0.1156 (0.00)	0.0109 (0.60)
<i>LOSS</i>	-0.0624 (0.00)	0.0241 (0.25)	0.3054 (0.00)	0.0013 (0.95)	-0.0334 (0.11)	-0.4817 (0.00)	1	-0.1603 (0.00)	-0.0757 (0.00)	-0.0722 (0.00)	0.0116 (0.58)	-0.1094 (0.00)
<i>TSR</i>	0.0985 (0.00)	-0.0665 (0.00)	-0.0930 (0.00)	0.0056 (0.79)	-0.0130 (0.53)	0.0775 (0.00)	-0.1060 (0.00)	1	-0.0255 (0.23)	-0.0321 (0.13)	0.0031 (0.88)	0.0169 (0.42)
<i>SIZE</i>	-0.1063 (0.00)	-0.1457 (0.00)	0.0209 (0.32)	-0.2019 (0.00)	0.1423 (0.00)	-0.1807 (0.00)	-0.0702 (0.00)	-0.0501 (0.01)	1	0.3805 (0.00)	0.2456 (0.00)	-0.0315 (0.13)
<i>BSIZE</i>	-0.0498 (0.01)	-0.1724 (0.00)	-0.0672 (0.00)	-0.0601 (0.00)	0.1271 (0.00)	-0.0488 (0.02)	-0.0809 (0.00)	-0.0319 (0.13)	0.4000 (0.00)	1	0.4477 (0.00)	-0.0552 (0.00)
<i>BINDEP</i>	0.0775 (0.00)	-0.1510 (0.00)	0.0032 (0.88)	0.0602 (0.00)	0.1219 (0.00)	-0.1443 (0.00)	0.0361 (0.08)	-0.0023 (0.91)	0.1543 (0.00)	0.0904 (0.00)	1	-0.0757 (0.00)
<i>TENURE</i>	-0.0136 (0.52)	-0.1574 (0.00)	-0.0103 (0.62)	0.0857 (0.00)	0.0044 (0.83)	0.0402 (0.05)	-0.1127 (0.00)	-0.0106 (0.61)	-0.0168 (0.42)	-0.0655 (0.00)	-0.0890 (0.00)	1

Table 12 Results of regression of *CCQ* on *SUPPORT* and *HIGH_SUPPORT*

	<i>SUPPORT</i> (Model 1)	<i>HIGH_SUPPORT</i> (Model 2)
<i>CCQ</i>	0.02973*** (5.12)	0.04185*** (5.79)
<i>EXCESSCOMP</i>	-0.0525*** (-4.30)	-0.06733*** (-4.43)
<i>TCOMP</i>	0.00464 (0.71)	0.00459 (0.57)
<i>ROA</i>	0.08165 (0.66)	-0.05632 (-0.37)
<i>LOSS</i>	-0.02575 (-0.94)	-0.06271* (-1.83)
<i>TSR</i>	0.06648*** (4.45)	0.06354*** (3.41)
<i>SIZE</i>	-0.03287*** (-4.47)	-0.03632*** (-3.97)
<i>BSIZE</i>	-0.00281 (-0.88)	-0.00304 (-0.76)
<i>BINDEP</i>	0.75592*** (5.71)	0.84833*** (5.15)
<i>TENURE</i>	0.00789 (1.01)	0.01994** (2.05)
Constant	4.44881*** (19.35)	0.77225*** (2.70)
Industry Control	Yes	Yes
Observations	2,221	2,221
R ²	9.6%	9.1%
Adjusted R ²	7.4%	6.8%

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 13 Results of regression of *OTHER_EXCLUSIONS* on *SUPPORT* and *HIGH_SUPPORT*

	<i>SUPPORT</i> (Model 1)	<i>HIGH_SUPPORT</i> (Model 2)
<i>OTHER_EXCLUSIONS</i>	-0.01247* (-1.71)	-0.01737* (-1.88)
<i>EXCESSCOMP</i>	-0.04600*** (-2.96)	-0.06308*** (-3.22)
<i>TCOMP</i>	0.00372 (0.47)	0.00282 (0.28)
<i>TSR</i>	0.06883*** (4.83)	0.06508*** (3.62)
<i>SIZE</i>	-0.16957*** (-7.98)	-0.19692*** (-7.35)
<i>BSIZE</i>	-0.01595*** (-3.54)	-0.02458*** (-4.32)
<i>BINDEP</i>	1.05582*** (5.25)	1.14949*** (4.53)
<i>TENURE</i>	0.00901 (1.03)	0.01006 (0.91)
Constant	0.54391 (1.05)	4.74770*** (7.26)
Industry Control	Yes	Yes
Observations	2,221	2,221
R ²	6.9%	7.0%
Adjusted R ²	5.5%	6.6%

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 14 Results of regression of CCQ_2 (using PCA) on *SUPPORT* and *HIGH_SUPPORT*

	<i>SUPPORT</i> (Model 1)	<i>HIGH_SUPPORT</i> (Model 2)
<i>CCQ₂</i>	0.01574*** (2.83)	0.01161* (1.67)
<i>EXCESSCOMP</i>	-0.04982*** (-4.07)	-0.06265*** (-4.10)
<i>TCOMP</i>	0.00429 (0.65)	0.00361 (0.44)
<i>ROA</i>	0.10637 (0.85)	-0.02853 (-0.18)
<i>LOSS</i>	-0.02714 (-0.98)	-0.06358* (-1.84)
<i>TSR</i>	0.06073*** (4.06)	0.05540*** (2.96)
<i>SIZE</i>	-0.03049*** (-4.11)	-0.03450*** (-3.72)
<i>BSIZE</i>	-0.00693** (-2.16)	-0.00795** (-1.99)
<i>BINDEP</i>	0.66134*** (5.00)	0.72854*** (4.41)
<i>TENURE</i>	-0.00161 (-0.21)	0.00735 (0.77)
Constant	4.67133*** (20.66)	1.09656*** (3.88)
Industry Control	Yes	Yes
Observations	2,221	2,221
R ²	8.9%	8.0%
Adjusted R ²	6.6%	5.8%

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 15 Results of 2SLS regression of *CCQ'* on *SUPPORT*

	<i>SUPPORT</i>
<i>CCQ'</i>	0.0248*** (3.60)
<i>EXCESSCOMP</i>	-0.0566*** (-4.55)
<i>TCOMP</i>	0.0005 (0.08)
<i>ROA</i>	0.0298 (0.24)
<i>LOSS</i>	-0.0207 (-0.76)
<i>TSR</i>	0.0577*** (3.62)
<i>SIZE</i>	-0.0419*** (-5.50)
<i>BSIZE</i>	-0.0006 (-0.19)
<i>BINDEP</i>	0.8175*** (6.12)
<i>TENURE</i>	0.0092 (1.17)
Constant	4.6692*** (19.76)
Industry Control	Yes
Observations	2,115
R ²	10.3%
Adjusted R ²	7.92%

t-values in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$