Determinants of financial restatement: does the CEO-board relationship and CEO compensation influence the risk of financial restatement?

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DETERMINANTS OF FINANCIAL RESTATEMENT:

DOES THE CEO BOARD RELATIONSHIP AND CEO COMPENSATION INFLUENCE THE RISK OF FINANCIAL RESTATEMENT?

by

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A Dissertation

Submitted to the University at Albany, State University of New York

in Partial Fulfillment of

the Requirement for the Degree of

Doctor of Philosophy

School of Business

Organizational Studies Program

2013
DETERMINANTS OF FINANCIAL RESTATEMENT:

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ABSTRACT

The cataclysmic business failures of the past decade clearly outline the necessity for effective governance research and policy. These failures have prompted prominent investors, politicians, and researchers to show an ever-increasing interest in corporate fraudulent activity and its relationship to executive compensation packages and the CEO-board relationship. Further research is needed to better understand these relationships, especially the relationship between governance mechanisms and their influence on financial restatement, an outcome of fraud. This study looks to answer that need by examining the CEO-board relationship, as well as CEO compensation components, the combined effects of CEO compensation and CEO-board relationship variables, and their correlation to financial restatement when comparing firms in the same relative industry. 109 matched pairs of restated and non-restated Fortune 500 organizations across twelve industries were used to collect and analyze information from corporate proxy statements and annual reports. The results suggest that CEO bonus as a percentage of total compensation was found to decrease the probability of financial restatement as the percentage of bonus increases. Further, this research has found that when an organization has a high proportion of board members brought on by the current CEO and offers very little salary, but higher levels of CEO stock-options and restricted stock as a percentage of total compensation, that organization is more likely to restate its financials. This study provides new insight into the relationship between governance mechanisms and the propensity to restate, something costly to a majority of stakeholders affiliated with a firm.
ACKNOWLEDGEMENTS

This has been an amazing, yet trying experience. First and foremost, I would like to thank God for the ability to make it through this process. He has given me the ability and perseverance to complete the program. I cannot take the credit. Second, I would like to acknowledge my husband, Richard. He has been a pillar of support. He has given me rationality, when I have been irrational; a shoulder when I needed support; and true encouragement and love throughout the whole process. Without him, I would not have made it through. Third, I would like to thank my children for their patience with me. For giving up their ‘mommy’ in times when I needed to work through something and their unconditional love and smiles that brought me through the process.

I would like to thank all my professors and classmates who made the program an amazing learning experience. As there are too many people to thank individually, I would like to focus on the few who made permanent impressions on my life. First, I would like to thank Dr. Raymond Van Ness. He has been an amazing mentor offering me vast knowledge and support, without which I would not have made it through the program. He is an amazingly talented researcher and teacher, and I will always cherish his guidance and wisdom. I would also like to thank my other two committee members, Dr. Paul Meising and Dr. Chuck Seifert. Both have offered immense wisdom and support throughout the doctoral process and I appreciate their time, patience and guidance. Dr. Seifert’s support and encouragement throughout this process cannot even be measured. I am eternally thankful for his kind words and immense wisdom, which I will never forget.
I would also like to thank my friends and colleagues in the program, especially Regina Yanson, who made the program fun and invaluable. Her determination and encouragement has been a source of strength. Finally, I would like to thank all my friends and coworkers outside the program for their words of encouragement. Their words brought wisdom, guidance, and comfort when needed.
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CHAPTER ONE: INTRODUCTION AND OVERVIEW

1.0 PROLOGUE

Prominent investors and politicians continue to focus ever-increasing attention on perceived flaws in the structure of corporate governance. Paramount among these concerns are executive compensation packages and CEO power and influence on the board and its impact on fraudulent activity. Recently, governance issues have been drawn into the ‘limelight’ by such notables as President Barak Obama and NYS Governor Andrew Cuomo and have garnered the front pages of Business Week, The Wall Street Journal and The Economist (Bernard, 2009; Heineman, 2009; Timiraos, 2011; Weisman & Lublin, 2009). Large compensation packages, especially those tied to firms with fraudulent executive practices, have become a flash-point that has motivated shareholders, policy makers and others into action. The Occupy Movement as well as the enactment of The Dodd-Frank Wall Street Reform and Consumer Protection Act, which includes language governing compensation practices, shareholder rights, and many other governance mechanisms, reflects this point (Pub.L. 111-203, H.R. 4173, 2010; Schneider, 2011).

What is driving this sense of inequity and perceived abuse of power? Perhaps the answer is hidden in the power and/or perceived power of the CEO over the corporate board. An executive has the responsibility to operate the organization to the benefit of a wide range of stakeholders. The power associated with this responsibility can be very significant, and in order to ensure appropriate decision-making, a variety of governance mechanisms have been established. These mechanisms, such as executive compensation,
corporate audits, and the board of directors, are established to ensure that stakeholder interests’ are upheld by executives and a proper balance of power is maintained (Kim & Nofsinger, 2007). In essence, these governance mechanisms exist to help reduce agency conflicts (Dey, 2008). For example, executive compensation packages that include long and short term incentive components assist in aligning executive goals to shareholder goals; boards that are balanced with inside and outside directors should, theoretically, have the ability to monitor managerial activities and curb fraud. However, in a time when executives are making approximately 300 times more than the average worker (Sahadi, 2007), and 85% of board members believe that their firms’ compensation plans are effective (Lawler, 2009), why are large firms failing due to managerial fraud or greed, causing financial restatement, hostile corporate acquisition, or dissolution of the organization? This question highlights doubts about the effectiveness of the governance system and the mechanisms that have been established to prevent corporate implosion. This research focuses on this question by analyzing the relationship between financial restatement, CEO compensation, and the CEO-Board relationship.

1.1 FINANCIAL RESTATEMENT

Financial restatement occurs when there is a material misstatement within an organization’s financial statements and the organization either voluntarily, or prompted by auditors or regulators, revises public financial information that was previously reported (GAO, 2002). There are numerous reasons an organization may restate their financials. The type of restatement is distinguished by the type of error made. The most
benign reasoning for financial restatement may include unintentional internal book or record deficiencies, misapplication of accounting standards due to transactional errors or the intricacy of the accounting standard itself. Conversely, restatements resulting from executive fraud or accounting manipulation should draw intense attention. Nevertheless, to a great extent, the literature does not suggest that these two entirely different types of restatement-causes have been central to analyzing and comparing outcomes from organizations that have restated their financials (Beasley, 1996; Harris & Bromiley, 2007; Hansen, McDonald, Messier, & Bell, 1996).

Regardless the cause of financial restatement, its effect can be catastrophic to an organization and its stakeholders. They are indicative of a critical weakness in the firm’s governance mechanisms and can also be costly to any stakeholder dependent on the organization. Financial restatement has the potential to decrease shareholder confidence, increase audit and PR expenditures, and decrease the market value of a firm by as much as 10% (GAO, 2002). Research has supported this claim, finding that corporations tend to suffer severe decline in market value upon the announcement of financial restatement (GAO, 2002; Kinney & McDaniel, 1989; Palmrose, Richardson, & Scholz, 2004; Turner, Dietrich, Anderson, & Bailey, 2001; Wu, 2002). Further, it has been found that an executive’s use of accounting fraud to deceive financial markets “causes greater losses than all other forms of property crimes combined” (Black, 2005, p. 734). In sum, financial restatement can devastate a variety of stakeholders, including communities, charities, unions, shareholders, and employees that are impacted by the firm. Despite this, there seems to have been an increase of corporate restatement events. In the past decade, financial restatements have risen to an all-time high, with 1,795 restatements
filed in 2006, more than three times the 475 restatements filed in 2003 (Glass Lewis & Co, 2006; Plumlee & Yohn, 2010; Stuart, 2010).

This upsurge of financial restatement has drawn the attention of the academic community and research in the area has blossomed. Academics have diligently tried to determine the cause and outcome of financial restatement, including the link to executive compensation (Cheng & Farber, 2007; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007), financial condition (Defond & Jiambalvo, 1991; Desai, Hogan, & Wilkins, 2006; Kinney & McDaniel, 1989), and decline in market value (Anderson & Yohn, 2002; GAO, 2002; Kinney & McDaniel, 1989; Palmrose, Richardson, & Scholz, 2004; Turner, Dietrich, Anderson, & Bailey, 2001; Wu, 2002). Most importantly, research has demonstrated that many misstatements are not the result of mathematical miscalculation (Erickson, Hanlon & Maydew, 2004; Erickson, Hanlon & Maydew, 2006), but are the consequence of executives engaging in aggressive accounting practices that are caused by the pressure to achieve the demands of capital markets (Richardson, Tuna, & Wu, 2002) or the personal desire to attain higher incentives within executive compensation packages (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007). Therefore, further research is necessary to broaden our comprehension of financial restatement. By understanding its determinants and their relationships to each other, corporate governance practices may be strengthened and the incidence of financial restatement may be reduced.
1.2 CEO COMPENSATION AND RESTATEMENT

Executive compensation packages have been used as a governance mechanism to align managerial interests with those of the shareholders (Jensen & Murphy, 1990; Murphy, 1985). An executive’s total compensation can consist of stock options, restricted stock, performance based bonuses and base salary as well as other ancillary expenses, such as travel expenditures, insurance costs and relocation expenses. Compensation packages, therefore, consist of long and short-term components.

Long-term compensation components have been utilized as a primary governance mechanism, aligning managerial and shareholder interests (Jensen & Murphy, 1990; Murphy, 1985). This equity alignment reduces agency costs and should, theoretically, strengthen the governance within a firm. However, there are issues that arise with stock-based compensation which can negate the effect of this governance mechanism and diminish the alignment between shareholders and management. Executives have the power to direct the organization, and as such, they have the ability to minimize their risk exposure when holding onto stock-based compensation. As agents who have the authority to guide the financial and strategic direction of the organization, executives have the ability to manage corporate earnings as a way to minimize risk. They may not necessarily commit fraud (Erickson, Hanlon, & Maydew, 2006), however it has been found that executives smooth revenue streams by managing earnings to meet analyst forecasts and reduce the risk of equity incentive loss (Cheng & Warfield, 2008) and maintain consistent positive earnings (Bauman & Shaw, 2006; Beneish & Vargus, 2002; Myers, Myers & Skinner, 2007). This mismanagement of earnings can be seen most frequently in income increasing accruals (Beneish & Vargus, 2002). The quality of these accruals can be low,
leading to the restatement of an organization’s financials and establishing a positive relationship between equity incentive compensation and earnings restatement. Support for this relationship has been demonstrated in numerous studies, where the risk of financial restatement increases when firms utilize higher levels of executive stock options in their compensation packages (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007).

Similar outcomes have been found when analyzing organizations’ short-term incentive compensation packages. Short-term components, including bonus, salary and ancillary reimbursement, are provided to executives as motivational techniques to attain objectives set forth by the board and to align performance with shareholders’ desires for the short term. A number of studies have examined managers’ motivation to manipulate earnings due to the influence of short-term bonuses and have found managers are tempted to manipulate or smooth earnings in order to consistently perform and receive their bonuses (Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock, 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995). These manipulations can include accruals of low quality, increasing the risk of earnings restatements.

As research has found significantly meaningful relationships between compensation components and restatement, further study is needed to examine the effect of CEO compensation components and their relationship to other governance mechanisms, integrating various components of governance and its relationship to restatement (Dalton & Dalton, 2011).
1.3 THE CEO-BOARD RELATIONSHIP

A CEO has the responsibility to operate the organization to the benefit of a wide range of stakeholders and the power associated with this responsibility can be significant. Governance mechanisms, such as executive compensation, corporate audits, and the board of directors, are established to ensure that stakeholder interests’ are upheld by executives and a proper balance of power is maintained (Kim & Nofsinger, 2007). Of these, the board of directors is the highest internal control mechanism responsible for monitoring the activities of the top management team (Fama & Jensen, 1983). In their summary of governance, Hitt, Freeman, and Harrison (2005) provide an explanation of the duties of the board, including a control role, a service role, and a resource dependence role. The control role monitors the behavior of managers, the service role guides and advises management, and the resource dependence role provides access to external sources (Hitt, et al., 2005). Research has shown, however, that a CEO’s power and influence on the board can reduce the ability of the board to effectively monitor managers (Agrawal & Chadha, 2005), minimizing the effectiveness of the board as a governance mechanism. This power is generally attributed to their legitimate authority, their extensive knowledge of the inner workings of the organization (information power), and the significant impact they can have on an organization’s strategic direction, internal processes, and structure (Beatty & Zajac, 1987; Mizruchi, 1983; Roth, 1995, Wallace, Worrell & Cheng, 1990). Common measures to determine the power and influence of executives on the board include the percentage of insiders to outsiders on the board, board chairman and CEO duality, percentage of ownership, service on other boards, employment history within the organization, and the participation of executives on board
committees (Daily & Johnson, 1997; Dalton, Daily, Ellstrand, & Johnson, 1998; Dalton & Dalton, 2011; Dey, 2008; Hitt, Freeman, & Harrison, 2005; Larcker, Richardson, & Tuna, 2007).

Although there has been evidence that CEO power and influence on the board can hinder a board’s ability to monitor executives (Agrawal & Chadha, 2005), most researchers have found no evidence of a sizable relationship between corporate financial performance and board leadership structure (Dalton, et al., 1998; Faley, 2007; Iyengar & Zampelli, 2009). These findings are a little shocking and seemingly go against general assumptions, however Dalton and Dalton (2011) have provided insight to this phenomenon. They argue that prior research has lacked a multi-level approach or at least a multi-mechanism approach to understanding the relationship between governance mechanisms and performance. Hillman, Shropshire, Certo, Dalton, and Dalton (2011) have validated this assertion; utilizing this methodology to establish a significant relationship between board composition, board monitoring and shareholder discontent. Academic literature pertaining to financial statement restatements can be enriched by further study utilizing a multi-mechanism approach and the financial community can benefit from possessing a greater understanding related to the under-researched components of the financial restatement domain.
1.4 RESEARCH PURPOSE

Research has demonstrated, that despite the attempt to align managerial and shareholder interest through long and short-term equity and performance compensation packages, a high risk of earnings mismanagement and financial misstatement by executives still exists. This is amplified when bonuses, restricted stock and stock options are a large portion of executive compensation. This study is designed to add to the body of research that has addressed the correlation between compensation components and financial restatement. It analyzes the CEO-Board relationship and the CEO’s ability to direct the board, compensation practices, and, most importantly, the resultant potential to increase risk of financial restatement. More importantly, this research looks to establish a framework for developing stronger governance practices, reducing the risk of financial restatement and its devastating impact on the stakeholder community. Therefore, this study addresses the relationships among the governance mechanisms and their ability to prevent managerial opportunism; it does not address the ethical orientation of a CEO and its relationship to fraudulent activity.

Recently, politicians have tried to reduce the incident of restatement with the enactment of The Dodd–Frank Wall Street Reform and Consumer Protection Act. This act provides additional support to external stakeholders who have been affected by a firm that is going through financial restatement. Its claw-back provision looks to reduce the influence of compensation as a catalyst for restatement by recovering a portion of an executive’s incentive compensation received during the three-year period preceding the restatement. The amount recovered is equal to the difference between what was paid on the erroneous financial data and the amount that would have been paid on the restated
statements (Pub.L. 111-203, H.R. 4173, 2010; Schneider, 2011). While this is valuable legislation, reprimanding those executives that have been lax in their managerial and fiduciary responsibilities, research must determine the root cause of why organizations restate their financials and how, going forward, there can be decidedly more preventative measures against restatement.

With this in mind, it is pivotal that research delves deeper into understanding the correlation between popularly utilized governance mechanisms and the propensity of an outcome such as financial restatements. We must understand, in a time when executive compensation is at an all-time high (Sahadi, 2007) and board members believe that their firm’s policies are effectively governing their organization (Lawler, 2009), why large firms are failing due to managerial fraud or greed, causing financial restatement. Research has already demonstrated a positive correlation between compensation components and earnings management and restatement (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Harris & Bromiley, 2007; Healy, 1985; Holthausen, Larker & Sloan, 1995); however, further research is needed to determine the connection between executive compensation and other governance mechanisms and the propensity to restate financials.

This study looks to add to this body of research by examining the CEO-Board relationship and its correlation to financial restatement, when comparing firms in the same relative industry. Further, this study will assess the influence of CEO compensation in this relationship in order to understand the interaction and capacity of governance mechanisms and their ability to protect stakeholder interests. Finally, this research is pivotal, as it provides further insight into the relationship between governance
mechanisms and the propensity to restate, something costly to a majority of stakeholders affiliated with a firm. Therefore, the following research questions are put forth:

1. How do characteristics of the CEO-Board relationship increase the risk of financial restatement?
2. How do CEO compensation components influence the likelihood of financial restatement?
3. What is the correlation between the characteristics of the CEO-Board relationship and CEO compensation components? Are there differences in this relationship when comparing restated versus non-restated organizations?
4. What combination of CEO-Board relationship variables and CEO compensation components increase the risk of financial restatement?
   a. Do CEO-Board relationship variables increase the risk of financial restatement when there are higher levels of CEO total compensation?
   b. Do CEO-Board relationship variables increase the risk of financial restatement when there are higher levels of CEO bonus as percentage of total compensation?
   c. Do CEO-Board relationship variables increase the risk of financial restatement when there are higher levels of CEO stock options and restricted stock as a percentage of total compensation?
   d. Do CEO-Board relationship variables increase the risk of financial restatement when there are higher levels of CEO salary as a percentage of total compensation?
1.5 ORGANIZATION OF DISSERTATION

In order to explore, examine, and analyze the above research questions, the remainder of the paper has been laid out in the following manner. Chapter 2 lays the foundation for this research and analysis, containing a focused literature review and outlines the current theories of corporate governance as well as power and leadership. The governance literature review focuses on literature and theories surrounding internal governance mechanisms, most specifically the board of directors and its governing ability as well as executive compensation. Chapter 3 presents an augmented literature review supporting the relationship between earnings restatements and the effects of the CEO-Board relationship on CEO compensation. It supports key constructs and develops the models as well as the hypotheses needed to confirm the models and answer the research questions posed earlier in this chapter. Chapter 4 explains the methodology utilized to test the hypotheses presented in Chapter 3. This chapter is divided into sections describing the measurement of key variables, the sample selection, and data analysis employed in this study. Chapter 5 presents the results of the data analysis, as well as discussion of any support of the stated hypothesis in Chapter 4. Chapter 6 discusses the implications of this research at length, as well as any limitations to the study and avenues for future research. Finally, this paper concludes with a complete list of references.
CHAPTER TWO: LITERATURE REVIEW

2.0 PROLOGUE

The literature review is divided into two main sections. The first section provides the operational definitions of the core constructs being studied in this research, financial restatement, CEO compensation and the CEO-Board relationship. The second section provides an overview of corporate governance literature, with a focus on Agency Theory and its relationship to corporate governance, the emergence of Corporate Social Responsibility as a construct of corporate governance, and a review of the primary internal governance mechanism, the board of directors. In sum, this literature review provides a comprehensive examination of pertinent governance research, providing a foundation for the analysis of financial restatement and its relationship with CEO compensation and the CEO-Board relationship.

2.1 DEFINITIONS

This section defines the concepts of the core constructs utilized to answer the research questions asked in Chapter 1. These definitions give the foundation necessary to operationalize these constructs and form models as seen in Chapter 3. The three constructs being defined in this section include financial restatement, CEO compensation, and the CEO-Board relationship.
2.11 FINANCIAL RESTATEMENT

Financial restatement occurs when there is a material misstatement within an organization’s financial statements and the organization either voluntarily, or prompted by auditors or regulators, revises public financial information that was previously reported (GAO, 2002). In general, financial restatements that are a result of material misstatement and fraud demonstrate critical and catastrophic failures in a firm’s governance system, usually under the guidance and influence of a firm’s executives.

There are numerous reasons why an organization may restate their financials and the distinguishing of restatement type is determined, in part, by the intentions of management as well as the type of error made. No matter the type of financial restatement, the effect is the same. Prior literature has demonstrated that the type of restatement does not produce significant differences in outcome when comparing or analyzing outcomes from organizations that have restated their financials (Beasley, 1996; Hansen, McDonald, Messier, & Bell, 1996; Harris & Bromiley, 2007).

The effect of financial restatement can be catastrophic to an organization as well as its stakeholders. Not only do restatements indicate a weakness in the firm’s governance mechanisms, it can also be costly to any individual or group with a fiduciary interest in the organization. Financial restatements can cause a decrease in shareholder confidence, an increase in audit and PR expenditures, and decrease the market value of a firm by as much as 10% (GAO, 2002). Academic research has supported this claim, finding that corporations tend to suffer severe decline in market value upon the
announcement of financial restatement (GAO, 2002; Kinney & McDaniel, 1989; Palmrose, Richardson, & Scholz, 2004; Turner, Dietrich, Anderson, & Bailey, 2001; Wu, 2002). Further, an executive’s use of accounting fraud to deceive financial markets “causes greater losses than all other forms of property crimes combined” (Black, 2005, p. 734). Unfortunately, despite the catastrophic effects of financial restatement, there seemed to have been an overall increase in the number of corporate restatement events. In the past decade, financial restatements rose to an all-time high of 1,795 in 2006, more than three times the 475 restatements filed in 2003 (Glass Lewis & Co, 2006; Plumlee & Yohn, 2010; Stuart, 2010). These numbers have tapered in recent years, with only 674 restatements filed in 2009 (Stuart, 2010).

The overall increase in the number of financial restatements has drawn the attention of multiple stakeholders, including the public, politicians and researchers, alike. Congressional investigation of financial restatements led to Section 704 of the Sarbanes-Oxley Act, which required to General Accounting Office to analyze the cause and effect of restatements (Pub. L. 107-204, H.R. 3763, 2002). The General Accounting Office (2002) noted the following:

The recent increase in the number and size of financial statement restatements and disclosures of accounting issues and irregularities underlying these restatements have raised significant questions about the adequacy of the current system of corporate governance and financial disclosure oversight.
In addition, as a way to reduce the incidence of fraudulent activity, Congress enacted The Dodd–Frank Wall Street Reform and Consumer Protection Act (2010). This act provides support to stakeholders who have been affected by a firm that is going through financial restatement through use of its claw-back provision. This provision aims to reduce the influence of compensation as a catalyst for restatement by allowing an organization to recover a portion of an executive’s incentive compensation awarded in the three year period preceding the fraudulent activity. The amount recovered is equal to the difference between what was paid on the erroneous financial data and the amount that would have been paid on the restated statements (Pub.L. 111-203, H.R. 4173, 2010; Schneider, 2011).

In addition to public and political inquiry into financial restatement, the upsurge of financial restatements in the early 2000’s has drawn the attention of the academic community. Research in the area has progressed, where academics have diligently tried to determine the cause and outcome of financial restatements, including the link to executive compensation (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007), financial condition (Defond & Jiambalvo, 1991; Desai, Hogan, & Wilkins, 2006; Kinney & McDaniel, 1989), and decline in market value (Anderson & Yohn, 2002; GAO, 2002; Kinney & McDaniel, 1989; Palmrose, Richardson, & Scholz, 2004; Turner, Dietrich, Anderson, & Bailey, 2001; Wu, 2002). Further, research has demonstrated that misstatements are not the result of mathematical miscalculation (Erickson, Hanlon & Maydew, 2004; Erickson, Hanlon & Maydew, 2006), but are the result of executives engaging in aggressive accounting practices due to the demands of capital markets (Richardson, Tuna, & Wu, 2002), or the personal desire
to attain higher incentives within executive compensation packages (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007). Research has also found that the outcome of financial restatement has led to significant penalties from financial markets through substantial decreases in market value (Black, 2005; GAO, 2002; Kinney & McDaniel, 1989; Palmrose, Richardson, & Scholz, 2004; Turner, Dietrich, Anderson, & Bailey, 2001; Wu, 2002), as well as significant personal penalties for executives and directors (Arthaud-Day, Certo, Dalton, & Dalton, 2006: Desai, Hogan, & Wilkins, 2006).

2.12 CEO COMPENSATION

CEO compensation is an outcome of the agency relationship between CEOs and shareholders. CEOs, as agents of the shareholder, maintain a fiduciary obligation to increase performance of the firm and ensure its existence in perpetuity. CEO Compensation has been widely studied as a dimension of governance and has traditionally been analyzed by its long-term and short-term compensation components (Dey 2008; Cheng & Farber, 2008; Jensen & Meckling, 1976; Larcker, Richardson & Tuna, 2007). These components are awarded to an executive in an attempt to align managerial and shareholder long and short-term interests (Jensen & Meckling, 1976). Long-term components generally include the issuance of restricted stock and stock options; short-term components include salary and performance-based bonuses, as well as ancillary items, such as insurance and transportation expenditures. These components, if utilized effectively, can be tools employed by the board to successfully govern an organization. However, if applied ineffectively, compensation components can lead to
catastrophic governance failure. An example of this can be seen in the awarding of performance-based bonuses. These bonuses, when effectively distributed, can align managerial and shareholder short-term interests. However, a number of studies have examined managers’ motivation to manipulate earnings due to the influence and consistent use of short-term bonuses. They have found that managers are tempted to manipulate or smooth earnings in order to consistently perform and receive their bonuses (Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock, 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995).

Large compensation packages, especially those tied to firms with fraudulent executive practices, have become a flash-point that has motivated shareholders, policy makers and academics into action. The Occupy Movement as well as the enactment of The Dodd-Frank Wall Street Reform and Consumer Protection Act, which includes language governing compensation practices, shareholder rights, and many other governance mechanisms, reflects this point (Pub.L. 111-203, H.R. 4173, 2010; Schneider, 2011). The academic community has responded by researching the effects of CEO compensation components and their relationship to fraudulent activity (Cheng & Farber, 2008; Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995).

In addition, other areas of research in executive compensation has blossomed, relating it to various socio-cultural movements (Cai, Jo, & Pan, 2011; Cordeiro & Sarkis, 2008; Tosi & Greckhamer, 2004; Walsh, 2008), financial performance (Carpenter & Sanders, 2002; Fong, Misangyi & Tosi, Jr, 2010; Gerhart & Milkovich, 1990), gender equity issues (Kulich, Trojanowski, Ryan, Haslam, & Renneboog, 2011; Ostroff &
Atwater, 2003; Vieito, 2012; Vieito & Khan, 2012), and acquisition and diversification strategies (Bodolica & Spraggon, 2009; Harford & Li, 2007; Wright, Kroll, & Elenkov, 2002).

2.13 THE CEO-BOARD RELATIONSHIP

The popular press and the academic community have testified to the widely shared belief that the CEO is the most powerful member of an organization (Daily & Johnson, 1997; Harrison, Torres, & Kukalis, 1988; Pearce & DeNisi, 1983; Pearce & Robinson, 1987). This power, defined as “the capacity of one party (the agent) to influence another party (the target)” (Yukl, 2010, pp. 152), can include a CEO’s ability to influence an individual, group (such as the board), or an entire organization. CEOs can utilize various types of power, dependent upon their individual characteristics and organizational structure. French and Raven (1959) developed an initial taxonomy establishing types of power based upon their source. It included reward power, coercive power, legitimate power, expert power, and referent power (French & Raven, 1959). This taxonomy has been enhanced over the years to include its dichotomization into position power and personal power (Bass 1960; Etzioni, 1961) and the addition of information power (Kotter, 1982; Pettigrew, 1972), ecological power (Cartwright, 1965; Schein, 1992), and charismatic power (George & Jones, 2008; Kudisch, Poteet, Dobbins, Rush & Russell, 1995; Yukl, 2010). Please see Figure 1 for a complete taxonomy.
CEO power is generally attributed to the their legitimate and information position powers, which are based upon the CEO’s position as well as the structural make-up of the organization, and their expert personal power, which stems from the knowledge they have gained while working in the industry (Beatty & Zajac, 1987; Daily & Johnson, 1997; Mizruchi, 1983). This power gives CEOs the ability to influence the direction of the individual, group, or organization they are leading (Yukl, 2010). Utilizing, various taxonomies, research has found that CEO power and influence has the ability to impact strategic direction (Bigley & Wiersema, 2002; Golden & Zajac, 2001; Haynes & Hillman, 2010; Pearce & Robinson, 1987), financial performance (Bigley & Wiersema, 2002; Buyl, Boone, Hendriks, & Matthyssens, 2011; Daily & Johnson, 1997;), and compensation (Boumosleh, Cline, & Saleh, 2009; Henderson, Masli, Richardson, & Sanchez, 2010; Westphal & Zajac 1995). Further, when assessing a CEO’s power and
influence within the context of board performance, research has found that a CEO’s power has the ability to diminish its performance (Boyd, 1994), as well as the independent discernment of the board (Dalton & Kesner, 1987). Common measures utilized to determine CEO power and influence on the board include the percentage of insiders to outsiders on the board, CEO and Board Chair duality, and the participation of executives on board committees (Dalton, Daily, Ellstrand, & Johnson, 1998; Dey, 2008; Hitt, Freeman, & Harrison, 2005; Larcker, Richardson, & Tuna, 2007). As this study’s primary focus is the study of CEO power and influence over the board, further discussion of this and its effect on governance is found in sections 2.2 and 3.1.

2.2 CORPORATE GOVERNANCE

This section provides the foundation and theoretical understanding of corporate governance. Definitions, theories and mechanisms of governance are discussed in this chapter in order to answer the research questions asked in Chapter 1 and provide a theoretical foundation for the models discussed in Chapter 3.

2.21 DEFINITIONS, THEORIES AND CONSTRUCTS OF GOVERNANCE

A corporation is a series of contracts between principals and agents, where the principal is the risk taking shareholder and the agent is the manager within the organization with specialized expertise (Aguilera & Jackson, 2003). Corporate governance preserves contractual compliance between the principal and agent. It is a series of mechanisms, such as executive compensation, corporate audits, regulatory bodies, and the board of directors, that endeavor to ensure stakeholder interests’ are upheld by executives and a proper balance of power is maintained (Aguilera, 2005; Kim
The study of corporate governance is essential to corporations and economies alike; according to Hambrick, Werder, and Zajac (2008), corporate governance is “of profound significance in modern economies. Not only do the constituents of firms stand to gain or lose greatly, depending on the quality and nature of corporate governance, but entire national systems can be propelled or stymied as well” (pp.384). In sum, corporate governance “reflects both the institutional environment external to firms, such as courts and regulations, as well as the institutional environment internal to firms, such as boards of directors, incentive systems and transparency “(Roth & Kostova, 2003, pp. 314-315); they are interdependent (Kose & Senbet, 1998) and the study of it is essential to the modern business model.

2.211 AGENCY AND STEWARDSHIP THEORIES

Research in the field of corporate governance has been ongoing for almost a century, however the term “corporate governance” wasn’t coined until the mid-1980’s (Steger & Amann, 2008). The origin of governance research dates back to Berle and Means (1932) book, The Modern Corporation and Private Property. In it, the two Harvard professors had recognized the clear separation of ownership and control of an organization as it grows larger, laying the foundation for agency theory. This theory is widely used in research and is the most prominent governance theory (Steger & Amann, 2008). Agency theory proposes that there are a series of contracts between principals and agents, where the principal is the risk taking shareholder and the agent is the manager within the organization with specialized expertise (Aguilera & Jackson, 2003). This principal-agent framework assumes management acts in their own self-interests (Argyris, 1973) and according to agency theory, corporate governance is a means to give some
‘control’ back to the shareholder through mechanisms, such as an organization’s board of directors, policies and procedures, and systems monitoring. These mechanisms all provide tighter controllership and a higher level of governance in order to ensure management is acting in the best interest of the stakeholders. There have been some criticisms of agency theory throughout literature, such as simplistic assumptions of human behavior, unacknowledged power relationships, and the lack of differentiation in ownership types (Steger & Amann, 2008). However, these criticisms can be overcome as the theory provides guidance when applying the framework broadly to a variety of different principal-agent situations (including all stakeholders), circumstances, and relationships (Steger & Amann, 2008). In addition, the application of other theories, such as contingency theory, where understanding the optimal course of action is dependent on the internal and external factors which may or may not be controllable (Steger & Amann, 2008), or resource dependence theory, where a corporation’s survival is contingent on its ability to obtain control over environmental resources (Barkema & Gomex-Mejia, 1998; Boyd, 1990), provide strength to agency theory and its significance in research.

Stewardship Theory is another, less prominent, governance theory that emerged from Donaldson and Davis in 1989. It focuses on behavioral approaches to governance and differs significantly from agency theory. Stewardship theory contends that “managers be given maximum liberty to make decisions and not be encumbered by rules or influences that would jeopardize optimal performance” (Hitt, Freeman, & Harrison, 2005, p.543). Theoretically, it proposes that managers have a vested interest in acting in the best interest of the organization as employees and therefore minimal interference is needed by governance mechanisms, such as the board of directors. It is a sociological and
psychological approach that depicts management as pro-organization and trustworthy (Davis, J.H., Schoorman, F.D. & Donaldson, L., 1997). According to stewardship theory, the role of the steward (manager) is to protect and maximize shareholder and organizational wealth using organizationally-oriented behaviors that enhance an organization’s functioning and effectiveness (Davis et.al., 1997; Caldwell & Karri, 2005). This theory contends that when governance mechanisms are put into place that hinder management’s ability to operate a corporation, an atmosphere of distrust is fostered that diminishes the covenant relationships between the board and management (Caldwell & Karri, 2005). In general, stewardship theory is contrary to many findings in restatement literature. For example, a number of studies have examined managers’ motivation to manipulate earnings due to the influence of short-term bonuses and have found they are tempted to manipulate earnings or smooth earnings in order to consistently perform and receive their bonuses (Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995). These findings are contrary to stewardship theory, which proposes that managers will not place their own self-gain before the well-being of the organization. As this research, and other findings discussed in Chapter 3 do not support stewardship theory, agency theory will be the foundation of the empirical models and hypotheses developed in Chapter 3.

2.212 CORPORATE SOCIAL RESPONSIBILITY

In addition to governance theories, a popular construct has emerged from the study of corporate governance, corporate social responsibility, also known as corporate citizenship. Corporate social responsibility redefines the agency relationship by including all corporate stakeholders in the principal or monitor role. Carroll’s (1979) definition of
corporate social responsibility has been one of the most resilient definitions within governance research, defining social responsibility as ‘the economic, legal, ethic, and discretionary expectations that society has of organizations at a given point in time’ (pp. 500). In application, this may include management’s responsibility to operate the organization effectively in order to maintain unions, employees, communities, suppliers, distributors, and shareholders. This includes the study of business ethics, values, corporate social performance, corporate citizenship, stakeholder management, social issues, government action, and business-political activity (Whetten, et al., 2002).

Criticism of social responsibility stems from a strict interpretation of agency theory, where the agent is under contract to act in the best interest of the shareholders (only) and the agent has a fiduciary responsibility to them (alone). The most well-known critic of corporate social responsibility is Milton Friedman. In his critique, “The Social Responsibility of Business is to Increase its Profits” (1970), Friedman states that “The manager is an agent of the individuals who own the corporation …, and his primary responsibility is to them” (pp. 33). He continues by stating that as a manager, one has a right to donate his or her own money as he or she finds fit, has the right to refuse employment with unethical employers, and even has the right to terminate his or her own employment because of some socially responsible cause; in these respects, however, he or she is utilizing his or her own funds and his or her own time not the funds of the business, nor the time or energy that has been contracted to the business. Milton’s overall premise is that one can do what they want with his or her own money and time, however if you are giving away corporate funds to socially desirable causes or spending time on
tasks not dedicated to making money for the organization, it is stealing from the shareholders (Friedman, 1970).

Advocates for corporate social responsibility have countered these arguments through research validating CSR as a natural function of the business which leads to improved financial performance. Many have argued that the act of being socially responsible, such as a strong commitment to stakeholder relationships and engagement in corporate philanthropy, can lead to improved financial performance. Research has found that corporate social performance led to positive future financial performance (Waddock & Graves, 1997), that charitable giving led to profit maximization, which in turn, drives future charitable contributions (Navarro, 1988); and a meta-analysis performed by Orlitzky, Schmidt and Rynes (2003) found a positive relationship between corporate citizenship and corporate financial performance. The results of these studies as well as the current political, economic, financial, and social global climate have shaped corporate social responsibility into a significant construct in the study of corporate governance, superseding many of the criticisms brought forth by a strict interpretation of agency theory. In effect, agency theory is broadened when including the “true fiduciary duty” a manager has to all its stakeholders (Steger & Amann, 2008). Therefore, corporate social responsibility enhances the need for sound governance policies and procedures, recognizing the need to maintain commitments with stakeholders (Kim, et al., 2010).

2.22 INTERNAL AND EXTERNAL GOVERNANCE MECHANISMS

As stated earlier, a corporation is a series of contracts between principals and agents, where the principal is the risk-taking shareholder and the agent is the manager
within the organization with specialized expertise (Aguilera & Jackson, 2003). Corporate governance is a means to ensure the success of an organization through mechanisms, such as an organization’s board of directors, policies and procedures, and systems monitoring. This involves a balance of power between internal and external forces, with the board of directors being at the top of the “internal governing mechanism that shapes firm governance” (Aguilera, 2005, p.39). Examples of other internal governance mechanisms include executive compensation, codes of conduct/integrity, internal auditors, and information systems. External governance mechanisms can include regulations and regulatory bodies, auditors, exchange regulations, consultants, investment banks, creditors, analysts, and capital markets (Kim, Nofsinger, & Mohr, 2010). A model demonstrating the relationship between many of the mechanisms and their ability to monitor can be seen below in figure 2.

**Figure 2**
Separation of Ownership, Monitoring and Control

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Monitors</th>
<th>Controllers</th>
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<td>Stockholders</td>
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<tr>
<td>Employees</td>
<td>Board of Directors</td>
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<td>NGO’s</td>
<td>Executive Comp.</td>
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<td>Society</td>
<td>Internal Auditors</td>
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<td>Attorneys</td>
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<td><strong>Monitors</strong></td>
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<td><strong>Managers</strong></td>
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Managers
A corporation’s board of directors is the most prominent governance mechanism and has the strongest potential to monitor and guide the activities of management. Every state requires that a corporation has a board of directors. The Model Business Corporation Act requires that all business affairs of a corporation be managed by the board (Kim, et. al., 2010). The board has four key tasks that influence corporate governance; “determining the strategy of the business, identifying and appointing senior management, ensuring that adequate and relevant information, control and audit systems are in place and giving adequate information to the shareholders” (Keenan, 2004, pp. 172-173). Hitt, Freeman, and Harrison (2005) provide a more defined explanation of these tasks, breaking the work of the board into three roles; a control role, a service role, and a resource dependence role. The control role monitors the behavior of managers, the service role guides and advises management, and the resource dependence role provides access to external sources (Hitt, et.al, 2005). In conjunction with these duties, the board maintains separate subcommittees, these may include the audit committee, nominating committee, compensation committee, executive committee, finance committee, and the governance committee (Kim, et. al., 2010).

Due to the prominent nature of the board and its relationship to the organization, researchers have long analyzed the composition of the board and its relationship to performance. Areas of research include board independence, including the percentage of insiders (Dalton, et. al, 1998; Hitt, et. al, 2005), CEO power and influence over the board (Dalton, Daily, Ellstrand, & Johnson, 1998; Dey, 2008; Hitt, Freeman, & Harrison, 2005; Larcker, Richardson, & Tuna, 2007). interlocking relationships (Kang, 2008; Mizruchi & Stearns, 1988) and chair duality (Dey, 2008; Efendi, Srivastava, & Swanson, 2007; Fama
& Jensen, 1983). In general, most of the authority of other internal governance mechanisms stem from the guidance of the board, its committees, or external governance mechanisms, the most prominent of these being CEO compensation (as discussed in section 2.12 above).

In contrast to internal governance mechanisms and the power of the board, external governance mechanisms are external forces that help shape the governance of an organization. It can include physical entities, such as auditors, creditors, institutional banks, attorneys, and regulatory bodies (Kim, et al., 2010), as well as external forces, such as competition and market forces (Hart, 1983; Jensen & Ruback, 1983), the threat of takeover (Grossman & Hart, 1988; Shleifer & Vishny, 1997), labor markets (Fama, 1980) and political forces (Kim, et al., 2010, Ribstein, 2003) that encourage strengthening of governance policies and the limitation of managerial opportunism. Recently enacted political reform in the United States includes the Sarbanes-Oxley Act in 2002 and the Dodd-Frank Reform Act in 2010. These reforms were enacted because of the significant fraudulent activity committed by executives and were designed to act as punitive measures to reduce fraudulent activity and restatement, and increase the effectiveness of internal and external governance mechanisms (Kim, et al., 2010).

2.3 CONCLUSION

The cataclysmic business failures of the past decade clearly outline the necessity for effective governance research and policy. These failures were rifled with managerial opportunism and fraud, devastating stakeholders and diminishing shareholder financial worth (Black, 2005). Understanding the interdependent relationship between internal
governance mechanisms and an organization’s stakeholders is critical, as internal governance mechanisms can be heavily influenced by and can heavily influence the external environment (Guillén, 2000; Kose & Senbet, 1998). Managers can create change and even chaos in the external environment if they not allocating resources appropriately or are acting unethically (Guillén, 2000). It is, therefore, imperative to recognize the importance of governance mechanisms working in harmony, protecting stakeholders from managerial opportunism.

In order to better comprehend the effectiveness of governance mechanisms put in place to protect stakeholders from the devastating effects of fraud and restatement, additional study is necessary. Understanding the relationship between governance mechanisms and monitors and their relationship to managerial opportunism is crucial, as one mechanism or monitor does not exist without the other. This research looks to analyze these relationships, including the CEO’s ability to direct the board, CEO compensation components, and the resultant potential to increase risk of financial restatement. Further discussion of the relationships between these governance mechanisms and the risk of financial restatement, including models and hypotheses built off the agency theory framework and prior literature, can be seen in Chapter 3.
CHAPTER THREE: MODELS AND HYPOTHESES

3.0 PROLOGUE

Based upon the literature review presented in Chapter 2, this chapter begins by presenting a discussion of the models examined in this research. The relationship between the characteristics of the CEO-Board relationship and the incidence of financial restatement is examined first, followed by discussion of the relationship between CEO compensation components and financial restatement. This chapter concludes with an assessment of the correlations between the variables and the possible effects they may have on each other when combined. This augmented literature review and analysis develops the models as well as the hypotheses needed to answer the research questions posed in Chapter 1.

3.1 THE CEO-BOARD RELATIONSHIP AND FINANCIAL RESTATEMENT

A corporation is a series of contracts between principals and agents, where the principal is the risk-taking shareholder and the agent is the manager within the organization with specialized expertise (Aguilera & Jackson, 2003). Corporate governance is a means to ensure the longevity of an organization through mechanisms, such as an organization’s board of directors, policies and procedures, and systems monitoring. According to agency theory, an effective organization is one where there are strong governance mechanisms in place to successfully monitor and curb managerial opportunism. These mechanisms are a balance of power between internal and external forces, with the greatest influence coming from the board of directors (Aguilera, 2005).
The board has three key tasks that influence corporate governance; “to determine strategy of the business,” “to identify and appoint senior management” and “to ensure adequate and relevant information, control and audit systems in place, and to give adequate information to the shareholders” (Keenan, 2004, pp. 172-173). These tasks can be redefined into three roles, the control role, a service role, and a resource dependence role. The control role monitors the behavior of managers, the service role guides and advises management, and the resource dependence role provides access to external sources (Hitt, Freeman & Harrison, 2005). As discussed in Chapter 1, this study looks to address what influence the CEO has over the ability of the board to effectively perform these three roles and the risk of financial restatement. Research has already found that “a CEO’s influence on the board can reduce the board’s effectiveness in monitoring managers” (Agrawal & Chadha, 2005, p.377). This study looks to add value to this fundamental assertion by attempting to understand the implications of the CEO-board relationship and its ability to increase the risk of financial restatement.

In order to understand the CEO-board relationship, multiple variables need to be analyzed. Common measures utilized to examine this relationship include the percentage of insiders to outsiders on the board, CEO and Board Chair duality, and the participation of executives on board committees (Dalton, Daily, Ellstrand, & Johnson, 1998; Dey, 2008; Hitt, Freeman, & Harrison, 2005; Larcker, Richardson, & Tuna, 2007). This research looks to expand upon these traditional measures by incorporating dimensions that may further assess the power and influence of CEOs on the board. These include the percentage of insiders on the board, CEO and Board Chair Duality, the percentage of board members who were brought onto the board by the current CEO (Daily & Schwenk,
1996), the existence of a non-executive principal director on the board (The Commission on Public Trust & Private Enterprise, 2003), and the average tenure of the board (Donoher, Reed, & Storrud-Barnes, 2007).

The first dimension, percentage of insiders to outsiders, looks at the individuals who have some form of connection with management (insider) to those who have no connection with management (outsider) (Dalton, et. al, 1998; Hitt, et. al, 2005). If the percentage of insiders on the board is significantly higher than outsiders, there is a risk that CEOs could have a strong influence on board oversight due to the higher level of legitimate and information power these top executives hold over both insiders and outsiders. While research has provided evidence that this variable has not had significant impact on firm performance (Dalton, et. al, 1998), Donoher, Reed, and Storrud-Barnes (2007) have found that board independence was a key factor in decreasing the likelihood of earnings restatements.

The second dimension, CEO/Chair duality, increases the risk that there will be a reduction in board oversight and may increase the amount of influence a CEO has over the direction of the organization. When duality exists, not only does the CEO have direct managerial control over the organization, but also over the board which, in its control role, is supposed to direct and oversee management. Research has shown that the risk of misstatement is statistically higher for those firms who have a CEO who is also chairman of the board (Efendi, Srivastava, & Swanson, 2007). Similarly, findings have shown that when the two roles are combined, the independence of the board is diminished (Dey, 2008; Fama & Jensen, 1983).
The third and fourth dimensions of the CEO-board relationship being analyzed are based upon the board’s perception of the CEO’s personal and position power. Personal power is the potential influence associated with an individual’s expertise, charismatic abilities, friendship or loyalty. Position power is the potential influenced associated with legitimate authority, as well as control over resources, rewards, information, punishment and the physical environment (Baldwin, Bommer & Rubin, 2008; Yukl, 2006). The third dimension of CEO power and influence measures the proportion of board members that were brought onto the board under the current CEO. In general, board members are either appointed by the board to fill vacancies or are selected by the board and elected by shareholders at the annual shareholder meeting or through proxy statement. If a shareholder does not vote and send in his or her proxy statement, that vote is allocated to executive management to vote at their discretion. In addition, proxy statements include executive management’s desired outcome for each proposal on the proxy. This gives CEOs a great deal of power and influence over the selection and election of new board members, especially when CEOs are active on the board (Kim & Nofsinger, 2007). This may influence the ability of a new member to act independently in the roles he or she must perform as a board member. First, the new board member might draw allegiance to the current CEO, especially if the CEO is active on the board and second, this allegiance may be fostered by the personal and position power that the CEO may have over the new member. Having been on the board longer and having inside knowledge of the organization may give the CEO a higher level of perceived personal expert power and legitimate and information position powers. These sources of power can give executives higher levels of influence over the new board members, enabling the
CEO to utilize various influence tactics to further his or her mission and reduce the board’s ability to perform its roles independently. In addition, the board’s relative power over executives may be compromised if the CEO has been responsible for the appointment of many members to the board (Daily & Schwenk, 1996).

The fourth dimension of the CEO-board relationship is the existence of a principal non-executive director, lead independent director or presiding director. In 2003 the conference board’s blue ribbon commission recommended the existence of a lead independent director or presiding director, when there was executive-chair duality (many companies also use the term principal director). Their recommendations included giving this non-executive director approval over information flow, board meeting agendas, meeting schedules, and chairing the meetings of non-executive directors (The Commission on Public Trust & Private Enterprise, 2003). This is an inverse measure of CEO power and influence over the board, as the existence of this non-executive lead director reduces the legitimate position power the CEO has on the board, especially a CEO that has CEO / chair duality. With a reduced level of power on the board, the CEO’s ability to exercise influence over board members is diminished and should not limit the ability of the board to govern the organization effectively.

The final dimension of the CEO-board relationship is the average tenure of board members on the board. Board tenure measures the overall average time board members serve on a board and it is an inverse measure of CEO power and influence. The longer the average tenure of board members, the more independent the board becomes, leading to a reduced sense of obligation to the CEO (Boeker, 1992; Boeker & Goodstein, 1993). Tenure allows the board to develop a deep base of organizational knowledge (Golden &
Zajac, 2001). This permits the board to make decisions without relying on managerial explanation and be seen as a separate source of power in the firm (Donoher, et. al, 2007). This, therefore, has the likelihood to reduce some of the CEO’s information position power and expert personal power, reducing his or her ability to influence the board.

When a board is unable to function effectively as a governance mechanism, this creates the opportunity for managerial opportunism. This lack of oversight can allow CEOs to have more perceived power and influence over the board as well as freedom in managing the organization. More specifically, the ability for a CEO to exert influence can create opportunities for management to manipulate earnings in order to maintain earnings growth and diversify their individual and corporate portfolio risk, increasing the propensity for earnings restatement. Research has found that board independence was a key factor in decreasing the likelihood of earnings restatements using measures of director independence and tenure (Donoher, et. al, 2007). This study furthers this research, addressing, in greater detail, the dimensions that measure the ability of a CEO to utilize power and influence over the board and its ability to increase the risk of financial restatement.

In summary, the more power and influence a CEO has over the board, the higher risk of financial restatement. Therefore, the following is hypothesized:

*Hypothesis 1a*: Organizations that have restated their financials will have a significantly higher percentage of insiders on the board than organizations that have not restated.

*Hypothesis 1b*: Organizations that have restated their financials will have a significantly higher likelihood of CEO/Chair duality than organizations that have not restated.
Hypothesis 1c: Organizations that have restated their financials will have a significantly higher percentage of board members brought on to the board during the CEO’s tenure than organizations that have not restated.

Hypothesis 1d: Organizations that have restated their financials will have significantly lower board tenure than organizations that have not restated.

Hypothesis 1e: Organizations that have restated their financials will have a significantly lower likelihood of having a principal director on the board than organizations that have not restated.

MODEL 1
Restated and Non-Restated Organizations and the CEO-Board Relationship
3.2 CEO COMPENSATION AND FINANCIAL RESTATEMENT

Executive compensation packages have been used as a governance mechanism to align managerial interests with those of the shareholders (Jensen & Murphy, 1990; Murphy, 1985). An executive’s total compensation can consist of long-term components, such as stock options and restricted stock, and short-term components, such as performance based bonuses, base salary, and ancillary expenses, such as travel expenditures, insurance costs and relocation expenses. Compensation packages provide the opportunity for boards to align management’s goals and objectives with those of the shareholder. This is accomplished through the use of long-term compensation components by granting managerial ownership in the organization (Jensen & Meckling, 1976). Managerial ownership should, theoretically, encourage managers to behave and manage the organization for long-term success. Common methods of offering ownership are the awarding of stock options and restricted stock based upon performance. Stock options are instruments that are usually exercisable in three to four years and allow managers to either exercise the options and hold stock or hold on to the exercisable options. Restricted stock is stock that is awarded to management, but usually does not vest for three to four years (Cheng & Warfield, 2005).

The equity alignment of shareholder interests with managerial interests when compensating executives with restricted stock and stock options reduces agency costs and should strengthen the governance within a firm. However, there are other issues that arise with stock-based compensation which can negate the effect of this governance mechanism and diminish the alignment of shareholders and management. Managers, unlike outside shareholders, have the ability to minimize their risk exposure when
holding onto stock-based compensation. As agents who have the authority to guide the financial and strategic direction of the organization, executives have the ability to manage earnings as a way to minimize risk. They may not necessarily commit fraud (Erickson, Hanlon, & Maydew, 2006), however, they have the ability to smooth revenue streams by managing earnings to meet analyst forecasts and, in turn, reduce the risk of their own personal equity incentive loss (Cheng & Warfield, 2008). Many studies have found that organizations manage earnings growth in order to maintain consistent positive earnings (Bauman & Shaw, 2006; Beneish & Vargus, 2002; Myers, Myers & Skinner, 2007). This mismanagement of earnings can be seen most frequently in income increasing accruals (Beneish & Vargus, 2002). The quality of these accruals can be low, leading to the restatement of an organization’s financials. This notion is supported further by prior research that has shown that there is an additional risk of earnings restatements when firms utilize executive stock options at various levels (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007).

Results-based short-term compensation components have caused similar effects. Bonuses are provided to executives as motivational techniques to attain objectives set forth by the board and align performance with shareholders’ desires for the short term. A number of studies have examined managers’ motivation to manipulate earnings due to the influence of short-term bonuses and have found they are tempted to manipulate earnings or smooth earnings in order to consistently perform and receive their bonuses (Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995). These manipulations can include accruals which are of low quality and increase the risk of earnings restatements.
Therefore, despite the board’s attempt to align shareholder and managerial interests with short-term and long-term performance based compensation packages, there is a high risk of earnings management and financial misstatement by executives when bonuses, restricted stock and stock options are a large portion of executive compensation. Therefore, the following is hypothesized:

*Hypothesis 2a: Organizations with restated financial statements will have a significantly higher percentage of CEO stock options and restricted stock as a percentage of compensation than organizations that have not restated their financials.*

*Hypothesis 2b: Organizations with restated financial statements will have significantly higher CEO bonuses as a percentage of compensation than organizations that have not restated their financials.*

Salary, a short-term component of a compensation package, is not performance-based. It is not dependent on the future long-term or short-term performance of the organization. When organizations have a higher percentage of base salary as a percentage of income, there is little incentive to manipulate earnings in order to attain targeted bonus or stock compensation performance goals. There are benefits and detriments to having salary as a higher percentage of the total compensation package. When base salary is a large portion of total compensation, there is an increased risk of a lower total compensation, reducing managerial motivation, and leaving the opportunity for misalignment of shareholder and managerial interests (Kim & Nofsinger, 2007). However, this consequence is balanced by the reduced risk of revenue smoothing and financial misstatement that comes with non-performance based component of pay. In addition, research has found that firms that reduced the amount of stock based compensation reduced the CEO’s incentive to make riskier business decisions (Cheng &
Farber, 2008). Therefore, by increasing a CEO’s salary as a higher percentage in his or her total compensation package, it reduces financial risk (Cheng & Farber, 2008) and reduces the likelihood of misstating earnings (Efendi, Srivastava, & Swanson, 2007).

Therefore, the following is hypothesized:

**Hypothesis 2c:** Organizations that have restated their financial statements will have a lower percentage of CEO base salary as a percentage of total compensation than those organizations that have restated their financials.

A CEO’s total compensation consists of all the above mentioned compensation components, including stock options, restricted stock, bonuses and base salary. This total package includes long-term and short-term performance based components. In order to attain performance objectives associated with desired compensation levels, research has shown that CEOs manage earnings growth in order to maintain consistent positive earnings (Bauman & Shaw, 2006; Beneish & Vargus, 2002; Myers, Myers & Skinner, 2007). Managed earnings growth can increase the risk of misstatement. During a period of material misstatement, CEOs are meeting the performance goals set forth by the board, either through managed earnings or fraudulent activity. Therefore, they are receiving their performance based compensation, including bonuses, stock options and restricted stock. Therefore, executives from restated organizations have a greater likelihood of having higher total compensation levels than those executives from organizations who did not materially misstate. Thus, the following is hypothesized:

**Hypothesis 2d:** Organizations that have restated financial statements will have a significantly higher level of CEO total compensation than those organizations that have not restated their financials.
3.3 THE CORRELATION BETWEEN THE CEO-BOARD RELATIONSHIP AND CEO COMPENSATION

In order to further assess the relationship between effective governance mechanisms and financial restatement, a greater understanding of the relationship between mechanisms is needed. Governance mechanisms, in theory, should interrelate as a network of forces working to ensure the life of the organization and its stakeholders (Kim & Nofsinger, 2007).

The board of directors and CEO compensation, in particular, are two mechanisms that are highly interdependent upon each other. It is either the board or a committee of the board that decides the compensation packages of
executives. In order to be an effective governance mechanism, it is critical that the board has the ability to minimize any CEO self-interest, especially when executives are motivated by their own wealth protection (Donoher, et. al, 2007). CEOs that have higher levels of power and influence over the board have further control over the direction, policies and procedures of the organization, including the ability to influence compensation packages. If the CEO has influence over the board, they not only have the ability to influence decisions on their overall compensation, but also have the ability to manage earnings increases with little to no oversight by the primary internal governing mechanism whose role is to monitor management (Hitt, et.al, 2005). Therefore, CEO power and influence on the board diminishes the ability of the board to perform with the best interest of the shareholder, creating agency conflicts (Dey, 2008). Recognizing this, there should be a positive correlation between CEO power and influence on the board and CEO compensation components, where an increase in CEO power and influence would indicate higher levels of performance-based and total compensation. Further, as research has indicated that compensation packages with a higher proportion of performance-based compensation (Cheng & Farber, 2008; Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995) and a reduced level of board independence (Donaher, et. al, 2007) increase the risk of financial misstatement, one may conclude that toxic combinations of governance failures would be evident in firms that restate. Therefore, organizations that have restated should have a higher significant positive correlation between performance-based compensation
components and increased levels of CEO power and influence. Thus, the following is hypothesized:

**Hypothesis 3a:** Organizations with restated financial statements will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and board independence, than organizations that have not restated their financials.

**Hypothesis 3b:** Organizations with restated financial statements will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and CEO/Chair duality, than organizations that have not restated their financials.

**Hypothesis 3c:** Organizations with restated financial statements will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and the percentage of board members brought on to the board during the CEO’s tenure, than organizations that have not restated their financials.

**Hypothesis 3d:** Organizations with restated financial statements will have a significantly higher positive correlation between CEO bonuses as a percentage of compensation and the percentage of insiders on the board, than organizations that have not restated their financials.

**Hypothesis 3e:** Organizations with restated financial statements will have a significantly higher positive correlation between CEO bonuses as a percentage of compensation and CEO/Chair duality, than organizations that have not restated their financials.

**Hypothesis 3f:** Organizations with restated financial statements will have a significantly higher positive correlation between CEO bonuses as a percentage of compensation and the percentage of board members brought on to the board during the CEO’s tenure, than organizations that have not restated their financials.

**Hypothesis 3g:** Organizations with restated financial statements will have a significantly lower negative correlation between CEO salary as percentage of total compensation and the percentage of insiders on the board, than organizations that have not restated their financials.

**Hypothesis 3h:** Organizations with restated financial statements will have a significantly lower negative correlation between CEO salary as percentage of total compensation and CEO/Chair duality, than organizations that have not restated their financials.

**Hypothesis 3i:** Organizations with restated financial statements will have a significantly lower negative correlation between CEO salary as...
percentage of total compensation and the percentage of board members brought on to the board during the CEO’s tenure, than organizations that have not restated their financials.

Hypothesis 3j: Organizations with restated financial statements will have a significantly higher positive correlation between CEO total compensation and the percentage of insiders on the board, than organizations that have not restated their financials.

Hypothesis 3k: Organizations with restated financial statements will have a significantly higher positive correlation between CEO total compensation and CEO/Chair duality, than organizations that have not restated their financials.

Hypothesis 3l: Organizations with restated financial statements will have a significantly higher positive correlation between CEO total compensation and the percentage of board members brought on to the board during the CEO’s tenure, than organizations that have not restated their financials.

Hypothesis 3m: Organizations that have restated their financials will have significantly lower negative correlation between CEO stock options and restricted stock as a percentage of compensation and board tenure, than organizations that have not restated.

Hypothesis 3n: Organizations that have restated their financials will have significantly lower negative correlation between CEO stock options and restricted stock as a percentage of compensation and the existence of a principal director on the board, than organizations that have not restated.

Hypothesis 3o: Organizations that have restated their financials will have significantly lower negative correlation between bonuses as a percentage of compensation and board tenure, than organizations that have not restated.

Hypothesis 3p: Organizations that have restated their financials will have significantly lower negative correlation between bonuses as a percentage of compensation and the existence of a principal director on the board, than organizations that have not restated.

Hypothesis 3q: Organizations that have restated their financials will have significantly lower positive correlation between salary as a percentage of compensation and board tenure, than organizations that have not restated.

Hypothesis 3r: Organizations that have restated their financials will have significantly lower positive correlation between salary as a percentage of compensation and the existence of a principal director on the board, than organizations that have not restated.
Hypothesis 3s: Organizations that have restated their financials will have significantly lower negative correlation between total CEO compensation and board tenure, than organizations that have not restated.

Hypothesis 3t: Organizations that have restated their financials will have significantly lower negative correlation between total CEO compensation and the existence of a principal director on the board, than organizations that have not restated.

MODEL 3
The Correlation of CEO Compensation and Characteristics of the CEO-Board Relationship between Restated and Non-Restated Organizations

CEO-Board Characteristics
- % of Insiders on the Board
- CEO/Chair Duality
- % of Board brought on by Current CEO
- Existence of Non-Executive Principal/Lead/Presiding Director
- Average Tenure of Board Members

CEO Compensation Components
- Long Term Incentive Compensation as a % of Total Compensation
- Bonuses as a % of Total Compensation
- Base Salary as a % of Total Compensation
- Total Compensation

Restated Organizations / Non-Restated Organizations
3.4 THE COMBINED EFFECTS OF THE CEO-BOARD RELATIONSHIP AND CEO COMPENSATION COMPONENTS AND ITS INFLUENCE ON RESTATEMENT

As the board of directors and CEO compensation, in particular, are two mechanisms that are highly interdependent upon each other (Kim & Nofsinger, 2007), not only is it relevant to understand the correlation between these two variables, as discussed above in section 3.2, but it is imperative that further understanding of the relationship between these variables and the likelihood of financial restatement be analyzed. Research has found that board independence was a key factor in decreasing the likelihood of earnings (Donaher, et. al, 2007), and higher levels of performance-based compensation increase the risk of financial restatement (Cheng & Farber, 2008; Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995), however research has not examined the modifying relationship the CEO power and influence on the board and CEO Compensation variables have on each other and their ability to increase or decrease the likelihood of financial restatement. For example, does having a greater percentage of long-term incentive compensation in a CEO’s compensation package increase or decrease the likelihood of financial restatement when the board has a longer average tenure? Research has shown that having higher percentages of stock options and restricted stock as a portion of CEO compensation can increase the risk financial restatement (Cheng & Farber, 2008). It has also been found that higher average tenure on the board decreases the likelihood of financial restatement (Donoher, et. al, 2007). The question posed here, however, is whether or not the existence of higher levels of long-term incentive compensation will modify the relationship
between tenure and restatement. Will it change this relationship? This is unknown. Therefore, utilizing the discussion and models put forth in sections 3.1, 3.2, and 3.3, the following is hypothesized:

Hypothesis 4a: Organizations that have a higher percentage of insiders on the board and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4b: Organizations that have a higher percentage of insiders on the board and higher levels of CEO bonus as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4c: Organizations that have a higher percentage of insiders on the board and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4d: Organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4e: Organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of CEO bonus as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4f: Organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4g: Organizations that have CEO/Chair duality and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4h: Organizations that have CEO/Chair duality and higher levels of CEO bonus as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4i: Organizations that have CEO/Chair duality and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.
Hypothesis 4j: Organizations that have a higher percentage of insiders on the board and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.

Hypothesis 4k: Organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.

Hypothesis 4l: Organizations that have CEO/Chair duality and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.

Hypothesis 4m: Organizations that have a principal director and restatement higher levels of total CEO compensation will have a significantly higher likelihood of financial.

Hypothesis 4n: Organizations that have a principal director and higher levels of CEO bonus as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4o: Organizations that have a principal director and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4p: Organizations that have longer board tenure and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4q: Organizations that have longer board tenure and higher levels of CEO bonus as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4r: Organizations that have longer board tenure and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Hypothesis 4s: Organizations that have a principal director and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.

Hypothesis 4t: Organizations that have longer board tenure and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.
MODEL 4
The Combined Effects of CEO Compensation and Characteristics of the CEO-Board Relationship and its Relationship to Financial Restatement

- CEO Total Compensation X
  - % Insiders on the Board
  - CEO/Chair Duality
  - % Board Tenure
  - Principal Director
  - Average Board Tenure

- CEO SO + RS / Total Compensation X
  - % Insiders on the Board
  - CEO/Chair Duality
  - % Board Tenure
  - Principal Director
  - Average Board Tenure

- CEO Bonus / Total Compensation X
  - % Insiders on the Board
  - CEO/Chair Duality
  - % Board Tenure
  - Principal Director
  - Average Board Tenure

- CEO Salary / Total Compensation X
  - % Insiders on the Board
  - CEO/Chair Duality
  - % Board Tenure
  - Principal Director
  - Average Board Tenure

Restated Organizations / Non-Restated Organizations
CHAPTER FOUR: METHODS

4.0 PROLOGUE

This chapter describes the research methods used in the collection and analysis of data utilized in this dissertation. This chapter is divided into sections describing the measurement of key variables, sample selection, and data analysis employed in this study. The methodological approach applied to this research is archival in nature, pulling quantitative information on firms that have restated and non-restated financials across several industries. This information is used to examine the relationship between CEO compensation, the CEO-Board relationship, and financial restatement.

4.1 MEASURES OF KEY VARIABLES

This section describes the key variables utilized to analyze the restatement models discussed in Chapter Three. Variables discussed include, restatement status, the percentage of independent directors on the board, CEO/Chair duality, board tenure, the percentage of board members brought on by the current CEO, the existence of a principal director, total CEO compensation, stock options and restricted stock as a percentage of total CEO compensation, bonus as a percentage of total CEO compensation, and salary as a percentage of total CEO compensation.
4.11 RESTATEMENT STATUS

Restatement Status is a variable that indicates whether a firm has or has not restated their financials during the time period analyzed in this study. This variable is dummy coded as either 0, non-restatement, or 1, restatement. Dummy coding this variable is similar to the methodology used in prior research, such as Cheng and Farber (2008) and Larker, Richardson and Tuna (2007).

As prior literature has indicated that there is no significant difference in outcome when analyzing various types of financial restatement (Beasley, 1996; Hansen, McDonald, Messier, & Bell, 1996; Harris & Bromiley, 2007;), this study does not distinguish between the different types of financial restatements. In addition, the restatement sample was drawn from the Government Accountability Office’s (GAO)’s 2007 Financial Restatements: Update of Public Company Trends, Market Impacts, and Regulatory Enforcement Activities Database (U.S. Government Accountability Office, 2007). The restatements included in this database were caused by accounting irregularities such as material misstatement and fraud. The database does not include any misstatements caused by routine business practices, such as stock split, mergers or accounting changes (U.S. Government Accountability Office, 2007). Therefore, it is assumed that if an organization is designated a 1, it has restated its financials due to material misstatement and fraud. See the sample section for further details on this database.
4.12 CEO COMPENSATION VARIABLES

CEO Compensation has been widely studied as a dimension of governance (Dey 2008; Cheng & Farber, 2008; Jensen & Meckling, 1976; Larcker, Richardson & Tuna, 2007) and has traditionally been broken down into long-term and short-term compensation components. These components are awarded to an executive in an attempt to align managerial and shareholder long and short-term interests (Jensen & Meckling, 1976). Long-term components generally include the issuance of restricted stock and stock options and short-term components can include salary and performance-based bonuses, as well as ancillary items such as insurance and transportation expenditures. For purposes of this study CEO compensation has been broken down into four different dimensions, stock options and restricted stock as a percentage of total CEO compensation, bonuses as a percentage of total CEO compensation, salary as a percentage of total CEO compensation, and total CEO compensation.

4.121 CEO STOCK OPTIONS AND RESTRICTED STOCK AS A PERCENTAGE OF TOTAL CEO COMPENSATION

Any form of managerial ownership, such as stock-based compensation, encourages management to make decisions that are sensitive to the interests of stockholders (Jensen & Meckling, 1976; Morck, Schleifer & Vishney, 1988). Similar to prior studies, this study looks at components of compensation that align management’s long-term goals and objectives with those of the shareholder by assessing two types of equity incentives, stock options and restricted stock awarded to executives (Cheng & Warfield, 2005; Dey, 2008;
Larcker, et.al, 2007). In order to remove any variability caused by industry or performance differences, this variable has been operationalized by taking the total amount of stock options and restricted stock awarded to the CEO and dividing it into the CEO’s total compensation for the year examined. This information has been collected from each firm’s 14A filed with the SEC and is analyzed as a percentage when operationalizing it in Models 2, 3, and 4 (Chapter 3). *Stock Options and Restricted Stock as Percentage of Total Compensation* is a continuous CEO Compensation variable.

**4.122 CEO BONUSES AS A PERCENTAGE OF TOTAL COMPENSATION**

Short-term bonuses have inspired managers to manipulate earnings in order to increase their own earning potential (Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995). Similar to Dey (2008), this study looks at short-term performance incentives and its influence in restatement. In this study, bonuses are operationalized by taking the total amount of bonuses awarded to the CEO and dividing it into the CEO’s total compensation for the year examined. All CEO bonus data has been collected from each firm’s 14A filed with the SEC and is analyzed as a percentage when operationalizing it in Models 2, 3, and 4 (Chapter 3). *Bonuses as Percentage of Total Compensation* is a continuous CEO Compensation variable.
4.123 CEO SALARY AS A PERCENTAGE OF TOTAL COMPENSATION

Efendi, et. Al (2007) found that a CEO with a higher percentage of salary in his or her total compensation has less incentive to misstate earnings. Salary, a short-term compensation component, is not performance-based. It is not dependent on the future long-term or short-term performance of the organization. When organizations have a higher percentage of base salary as a percentage of income, there is little incentive to manipulate earnings in order to attain targeted bonus or stock compensation performance goals. In this study, salary has been operationalized by taking the total amount of salary awarded to the CEO and dividing it into the CEO’s total compensation for the year examined. All salary data has been collected from each firm’s 14A filed with the SEC and is analyzed as a percentage when operationalizing it in Models 2, 3, and 4 (Chapter 3). *Salary as Percentage of Total Compensation* is a continuous CEO Compensation variable.

4.124 CEO TOTAL COMPENSATION

A CEO’s total compensation package consists of long and short-term performance based components, and may include stock options, restricted stock, bonuses, and base salary, as well as any ancillary benefits. In order to attain performance objectives associated with desired compensation levels, research has shown that CEOs manage earnings growth in order to maintain consistent positive total earnings (Bauman & Shaw, 2006; Beneish & Vargus, 2002; Myers, Myers & Skinner, 2007). A complete measure of total earnings is total compensation. For purposes of this study, and in order to remove
any variability caused by industry or performance differences, this variable has been operationalized by taking the total compensation awarded to the CEO (including salary, bonus, stock options and restricted stock) for the year examined. All total compensation data has been collected from each firm’s 14A filed with the SEC and is analyzed as a percentage when operationalizing it in Models 2, 3, and 4 (Chapter 3. *Total Compensation* is a continuous CEO Compensation variable.

4.13 THE CEO-BOARD RELATIONSHIP

Board composition and its effect on performance has been widely studied in governance literature (Dalton, Daily, Johnson, & Elstrand, 1998; Dalton, Daily, Johnson & Elstrand, 1999; Dey, 2008). This research examines board composition and the potential to increase CEO power and influence over the board. Some common measures utilized to determine the CEO-board relationship include the percentage of insiders to outsiders on the board, CEO and Board Chair duality, and the participation of executives on board committees (Dalton, Daily, Ellstrand, & Johnson, 1998; Dey, 2008; Hitt, Freeman, & Harrison, 2005; Larcker, Richardson, & Tuna, 2007). This research looks to expand upon these traditional measures by incorporating additional dimensions that may further assess the power and influence of CEOs on the board. These include the percentage of board members who were brought onto the board by the current CEO (Daily & Schwenk, 1996), the existence of a non-executive principal director on the board (The Commission on Public Trust & Private Enterprise, 2003), and the average tenure of the board (Donoher, Reed, & Storrud-Barnes, 2007). In sum, this study has
broken CEO-board relationship into five different dimensions, insider composition, CEO/Chair duality, average tenure of the board, the proportion of board members that were brought onto the board under the CEO in the year being analyzed, and the existence of a principal (lead or presiding) director.

4.131 INSIDER COMPOSITION OF THE BOARD

Insider Composition of the Board assesses the number of individuals who have some form of connection with management (insider) to those who have no connection with management (outsider) (Dalton, et. al, 1998; Hitt, et. al, 2005). If the percentage of insiders on the board is significantly higher than outsiders, there is a risk that CEOs could have a strong influence on board oversight due to the higher level of legitimate and information power these top executives hold over both insiders and outsiders. While research has provided evidence that this variable has not had significant impact on firm performance (Dalton, et. al, 1998), Donoher, Reed, and Storrud-Barnes (2007) have found that board independence was a key factor in decreasing the likelihood of earnings restatements. For purposes of this study, and consistent with other restatement and board literature (Dey, 2008; Larcker, et.al, 2007), this variable is measured as the percentage of board members that are insiders to the organization (current and prior executives of the organization who serve on the board). Beasley (1996) utilized a similar measure for his study on broad composition and fraud; however his measurement was based on the percentage of outsiders which is simply the inverse of the measurement utilized in this study. This information has been collected from each firm’s 14A filed with the SEC and
has been analyzed as a percentage when operationalizing it in models 1, 3, and 4. Insider Composition of the Board is a continuous CEO Power and Influence variable.

4.132 CEO/CHAIR DUALITY

CEO/Chair duality increases the risk that there will be a reduction in board oversight and may increase the amount of influence a CEO has over the direction of the organization. Research has shown that the risk of misstatement is statistically higher for those firms who have a CEO who is also chairman of the board (Efendi, Srivastava, & Swanson, 2007). Likewise, findings have shown that when the two roles are combined, the independence of the board is diminished (Dey, 2008; Fama & Jensen, 1983), increasing the necessity to include it as a measure of CEO power and influence. Similar to prior literature (Dey, 2008; Larcker, et. al., 2007), this study uses dummy coding to measure duality; CEO/Chair duality has been dummy coded, 0 when the CEO does not hold the position of Chair and 1 if the CEO is the chairman of the board. This information has been collected from each firm’s 14A filed with the SEC and has been analyzed as a categorical variable when operationalizing it in models 1, 3, and 4. CEO/Chair Duality is a dichotomous CEO Power and Influence variable.

4.133 AVERAGE TENURE OF THE BOARD

Board tenure measures the overall average time board members serve on a board and is an inverse measure of CEO power and influence. The higher the average tenure of
board members, the more independent the board becomes, leading to a reduced sense of obligation to the CEO (Boeker, 1992; Boeker & Goodstein, 2003). Tenure allows the board to develop a deep base of organizational knowledge (Golden & Zajac, 2001). This permits the board to make decisions without relying on managerial explanation and be seen as a separate source of power in the firm (Donoher, et al., 2007). This, therefore, has the likelihood to reduce some of the CEO’s information position power and expert personal power, reducing his or her ability to influence the board. Similar to prior literature (Donoher, et al., 2007), average tenure of the board is measured by taking the total number of years of service and dividing it by the number of board members. This information has been collected from each firm’s 14A filed with the SEC and has been analyzed as a continuous variable when operationalizing it in models 1, 3, and 4. *Average Tenure of the Board* is a continuous CEO Power and Influence variable.

### 4.134 PERCENTAGE OF BOARD MEMBERS ELECTED ONTO THE BOARD DURING THE CEO’S TENURE

The third dimension of CEO power and influence measures the proportion of board members that were brought onto the during the CEO’s tenure. In general, board members are either appointed by the board to fill vacancies or are selected by the board and elected by shareholders at the annual shareholder meeting or through proxy statement. If a shareholder does not vote and send in his or her proxy statement, that vote is allocated to executive management to vote at their discretion. In addition, proxy statements include executive management’s desired outcome for each proposal on the proxy. This gives
CEOs a great deal of power and influence over the selection and election of new board members, especially when CEOs are active on the board (Kim & Nofsinger, 2007). In addition, research has found that the board’s relative power over executives may be compromised if the CEO has been responsible for the appointment of many members to the board (Daily & Schwenk, 1996). For purposes of this study, this variable has been measured by calculating the proportion of board members elected onto the board during the tenure of the CEO. This information has been gathered from the firms’ 14A filing from the SEC website and has been analyzed as a percentage when operationalizing it models 1, 3, and 4). Percentage of Board Members Elected/Nominated onto the Board under the CEO in the Year Being Analyzed is a continuous CEO Power and Influence variable.

4.135 THE EXISTENCE OF A PRINCIPAL, PRESIDING, OR LEAD DIRECTOR ON THE BOARD

In 2003 the conference board’s blue ribbon commission recommended the existence of a lead independent director or presiding director, when there was executive-chair duality (many companies also use the term principal director). Their recommendations included giving this non-executive director approval over information flow, board meeting agendas, meeting schedules, and chairing the meetings of non-executive directors (The Commission on Public Trust & Private Enterprise, 2003). The existence of a principal should reduce the overall power and influence of a CEO due to a reduction in legitimate power, making the variable an inverse measure of CEO power and
influence. This study uses dummy coding to measure the existence of a lead, principal, or presiding director; if one exists, then the organization has been dummy coded 1, if one does not exist, the organization has been dummy coded 0. This information has been gathered from the firms’ 14A filing from the SEC website and has been analyzed as a categorical variable when operationalized in models 1,3, and 4. *The Existence of a Principal, Presiding, or Lead Director on the Board* is a dichotomous CEO Power and Influence variable.

4.2 SAMPLE SELECTION

Financial restatement occurs when there is a material misstatement within an organization’s financial statements and the organization either voluntarily, or prompted by auditors or regulators, revises public financial information that was previously reported (GAO, 2002). The sample of restatements used in this study has drawn from the Government Accountability Office’s 2007 FINANCIAL RESTATEMENTS: Update of Public Company Trends, Market Impacts, and Regulatory Enforcement Activities Database (U.S. Government Accountability Office, 2007). The database includes organizations that have announced material misstatement of their financial statements from 2002-2005, as well as a supplemental database of organizations that announced material misstatement from January through June 2006. All the restatements included in this database have been caused by accounting irregularities, such as material misstatement and fraud; the database does not include any misstatements caused by
routine business practices, such as stock split, mergers or accounting changes (U.S. Government Accountability Office, 2007).

The timeframe of interest within this study is a particularly interesting period within business, especially when analyzing publically traded organizations. It includes the financial fall-out from many organizational collapses within the energy and telecommunications industries and the implementation of the Sarbanes-Oxley Act. These events have created an increased political, public, and academic awareness of earnings mismanagement and fraudulent financial decisions made by executives. This period also includes an overall increase in the number of announcements of financial restatement by publically traded organizations, with announcements rising to an all-time high of 1,795 in 2006, more than three times the 475 restatements filed in 2003 (Glass Lewis & Co, 2006; Plumlee & Yohn, 2010; Stuart, 2010).

Consistent with prior financial restatement literature, a matched-sample design was employed to assess the governance differences between restated and non-restated organizations (Aier, Comprix, Gunlock & Lee, 2005; Arthaud-Day, Certo, Dalton, & Dalton, 2006; Harris & Bromiley, 2007). In order to create the restatement sample, a general population of Fortune 500 restatements was assembled from the 2002 – mid 2006 databases. These databases only included restatement announcement dates, not actual restatement events. Using the dates provided in the databases, 8Ks and company announcements were reviewed to create a population of restatement events for each organization. This population included 502 restatement events from 178 Fortune 500 companies. A sample was then drawn from this population by selecting the most recent year of restatement for each organization and removing those organizations that restated
only 1 or 2 quarters. To create a paired-match sample each company was then matched to a non-restated Fortune-500 organization based on industry classification. For every organization selected, the Annual Report and Proxy Statement were gathered, giving a total sample of 254 sets of financial statements, 127 from restated organizations and 127 from non-restated organizations.

All matching criteria and data collection for each matched pair was collected for the year of restatement for the restated company. The board and compensation data was collected using each company’s 14A (Proxy Statement) and 10-K (Annual Report) filed with the SEC for the year being analyzed. Eighteen matched pairs had to be removed due to incomplete data. The final sample totaled 218 sets of financial statements, 109 from restated organizations and 109 non-restated organizations. See Table 4.1 for the descriptive statistics of the 109 restated organizations (the non-restated organizations were matched based upon these descriptive statistics). Panel A of Table 1 portrays the yearly distribution of the restatement sample. The sample period spans from 2001-2005, with a majority of restatements occurring from 2003-2004 (62.38%). Panel B of Table 1 presents the industry breakdown of the restatement sample used in this study. As demonstrated in the table, a broad range of industries were represented in this study.

**Table 4.1**

**Fortune 500 Restated - Non-Restated Match Sample Descriptive Statistics**

<table>
<thead>
<tr>
<th>Panel A: Yearly Distribution of Restatements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><img src="chart.png" alt="Table 4.1" /></td>
</tr>
</tbody>
</table>
In order to operationalize the models discussed in Chapter 3, various statistical analyses were employed. First, descriptive statistics were calculated, including the means, standard deviations, and two-tailed Pearson correlations for all variables analyzed. Then, consistent with prior restatement literature (Dey, 2008; Hennes, Leone, & Miller, 2008; Hennes, Leone, & Miller, 2011), logistic regression was performed to find differences in

<table>
<thead>
<tr>
<th>Industry</th>
<th>Two-Digit SIC Code</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy &amp; Energy Distribution</td>
<td>13, 35, 49</td>
<td>17</td>
<td>15.60%</td>
</tr>
<tr>
<td>Food Products</td>
<td>20</td>
<td>4</td>
<td>3.67%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>25, 28, 30, 34</td>
<td>8</td>
<td>7.34%</td>
</tr>
<tr>
<td>Consumer Electronics &amp; Services</td>
<td>35, 36, 38, 50, 73</td>
<td>10</td>
<td>9.18%</td>
</tr>
<tr>
<td>Transportation</td>
<td>37, 41, 42, 45</td>
<td>9</td>
<td>8.26%</td>
</tr>
<tr>
<td>Health</td>
<td>80</td>
<td>2</td>
<td>1.83%</td>
</tr>
<tr>
<td>Retail</td>
<td>51-56, 59, 78</td>
<td>27</td>
<td>24.77%</td>
</tr>
<tr>
<td>Communications</td>
<td>48</td>
<td>9</td>
<td>8.26%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>60, 61, 63, 64, 67</td>
<td>14</td>
<td>12.84%</td>
</tr>
<tr>
<td>Restaurant Industry</td>
<td>58</td>
<td>3</td>
<td>2.75%</td>
</tr>
<tr>
<td>Professional Services</td>
<td>72, 73, 87</td>
<td>4</td>
<td>3.67%</td>
</tr>
<tr>
<td>Other</td>
<td>All Others</td>
<td>2</td>
<td>1.83%</td>
</tr>
<tr>
<td>Total</td>
<td>109</td>
<td></td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### 4.3 STATISTICAL ANALYSIS FOR STUDYING HYPOTHESES

In order to operationalize the models discussed in Chapter 3, various statistical analyses were employed. First, descriptive statistics were calculated, including the means, standard deviations, and two-tailed Pearson correlations for all variables analyzed. Then, consistent with prior restatement literature (Dey, 2008; Hennes, Leone, & Miller, 2008; Hennes, Leone, & Miller, 2011), logistic regression was performed to find differences in
CEO compensation and board relationship variables as a function of restatement, testing the hypotheses in Models 1 and 2 from Chapter 3 in separate analyses. This form of regression was chosen because of its ability to predict discrete dependent variables from either discrete or independent variables (Tabachnik & Fidell, 2001). Testing for Model 3 included calculating Z scores using Pearson r correlations between CEO compensation and board relationship variables from each of the restated and non-restated samples. Transformation of the samples’ Pearson r’s to Z-scores allowed for accurate comparison between correlations in the determination if there were significant differences between the two samples (Fields, 2005). Finally, logistic regression was used to test the effects of combinations of CEO compensation and board relationship variables and their ability to predict financial restatement as demonstrated by the hypotheses supporting Model 4 in Chapter 3. Once again, this method was chosen due to the use of a discrete dependent variable and discrete and continuous independent variables (Tabachnik & Fidell, 2001). A Modified Bonferroni correction was applied to the results for each model in order to control the overall Type I error rate caused by employing multiple significance tests (Fields, 2005). The type of correction that was applied was similar to that recommended by Holm (1979), where an adjusted alpha was calculated for each p value in a model, using the smallest first. The formula for each adjusted alpha was \(0.05/((\text{# of tests in a model} – \text{its position}) + 1)\). The results of these analyses are discussed in detail in Chapter 5.
CHAPTER FIVE: RESULTS

5.0 PROLOGUE

This chapter presents the empirical analysis of the quantitative restatement data collected in five primary sections. Section 5.2 discusses the means, standard deviations, and two-tailed Pearson correlations were calculated for all variables analyzed. Section 5.3 describes the results of the logistic regression analysis on the difference between matched pairs of restated and non-restated companies when examining the CEO-board relationship variables. Section 5.4 describes the results of the logistic regression analysis on CEO compensation differences between matched pairs of restated and non-restated companies. Next, section 5.5 discusses the z-score comparisons between correlations between CEO-board relationship and compensation variables when analyzing both the restated and non-restated samples. Finally, section 5.6 discusses the differences found between matched pairs of restated and non-restated companies when looking at the combined effects of CEO compensation and board relationship variables using logistic regression.

5.1 DESCRIPTIVE STATISTICS

Descriptive statistics with means, standard deviation, and correlations among variables are presented in Table 5.1. As would be expected with a sample size of 218, at least a third of the correlations were statistically significant, however, very few of the correlations were large. Out of the forty-five correlations, only three of the correlations were greater than .60, primarily caused by the calculation of compensation. Further, 88% of the correlations were less
than .30. These relatively low correlations provide support for the differentiation between the multiple variables within the dimensions of CEO Compensation and the CEO-board relationship.
5.2 DIFFERENCES IN THE CEO-BOARD RELATIONSHIP

Logistic regression analyses were performed on the prediction of the occurrence of financial restatement as a function of the dimensions of the CEO-board relationship; including the percentage of insiders on the board, CEO/Chair duality, the average tenure of the board, the percentage of the board elected during the current CEO’s tenure, and the existence of a principal director. The results of the analysis can be seen in Table 5.2 below.

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>Wald Test (z - ratio)</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Insiders on the Board</td>
<td>2.13</td>
<td>3.64</td>
<td>8.41</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>0.47</td>
<td>2.06</td>
<td>1.59</td>
</tr>
<tr>
<td>Average Tenure of the Board</td>
<td>(0.07)</td>
<td>2.50</td>
<td>.94</td>
</tr>
<tr>
<td>% of Board Elected CEO Tenure</td>
<td>.97</td>
<td>3.58</td>
<td>2.63</td>
</tr>
<tr>
<td>Existence of a Principal Director</td>
<td>.04</td>
<td>.02</td>
<td>1.04</td>
</tr>
</tbody>
</table>

Notes: N = 218

Non-significant results were found when analyzing restatement as a function of any of the power and influence variables components. All five variables had similar insignificant results with overall success rates all greater than chance. The percentage of insiders on the board model had a prediction that was moderately successful, but
insignificant, with 64.2% of the non-restated organizations predicting correctly, 44% of the restated predicting correctly, and an overall success rate of 54.1% (greater than chance). The CEO/Chair duality model had similar results with 27.5% of the non-restated organizations predicting correctly, 80.7% of the restated predicting correctly, and an overall success rate of 54.1%. Likewise, the average tenure of the board model had an overall success rate of 55%, with 50.1% of non-restated organizations predicting correctly and 59.6% of restated organizations predicting correctly. In the same way, the existence of a lead director and the percentage of the board elected during the CEO tenure models also produced overall success rates greater than chance. The percentage of board elected during the CEO tenure model had 56% non-restated organizations predicting correctly and 61.5% of restated organizations predicting correctly with an overall success rate of 58.7% and the existence of a lead director model had 56.9% of non-restated organizations predict correctly, 44% of restated organizations predict correctly, and an overall success rate of 50.5%.

Table 5.2 displays the regression coefficients, Wald statistics, and odds ratios for each of the five compensation components as predictors of the occurrence of restatement. All five predictors fail to significantly predict restatement according to the Wald criterion and the odds ratio. Based on the results of this analysis, it appears that none of the CEO power and influence variables produce models that are better than the constant only model at predicting restatement.
5.3 DIFFERENCES IN CEO COMPENSATION COMPONENTS

Logistic regression analyses were performed on the prediction of the occurrence of financial restatement as a function of the dimensions of CEO compensation; including stock options and restricted stock as a percentage of total CEO compensation, bonuses as a percentage of total CEO compensation, salary as a percentage of total CEO compensation, and total CEO compensation. The results of the analysis can be seen in Table 5.3 below.

TABLE 5.3

<table>
<thead>
<tr>
<th>Logistic Regression Analysis of CEO Compensation Components as Predictors of Financial Restatement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>CEO Total Compensation</td>
</tr>
<tr>
<td>CEO SO &amp; RS / Total Comp.</td>
</tr>
<tr>
<td>CEO Bonus / Total Comp.</td>
</tr>
<tr>
<td>CEO Salary / Total Comp.</td>
</tr>
</tbody>
</table>

Notes: *p < .0125  N = 218

Mixed results were found when analyzing restatement as a function of the various compensation components. Both CEO stock options and restricted stock as a percentage of compensation and CEO bonus as a percentage of compensation had effective models, but only the CEO bonus as a percentage of compensation model had statistically significant results when predicting restatement. The CEO stock options and restricted stock as a percentage of compensation as a prediction of restatement model was fairly
successful, with 46.8% of the restated organizations predicting correctly, 64.2% of the non-restated organizations predicting correctly, and an overall success rate of 55.5%. In addition, when examining bonuses as a percentage of compensation to predict restatement, 44.0% of the restated organizations predicted correctly, 65.1% of the non-restated organizations predicted correctly, and an overall success rate of 54.6%. Both models predicted restatement better than the constant-only models, as the constant-only models had overall success rates of 50%, equal to chance. Weaker models with insignificant results were found in CEO total compensation and salary as a percentage of compensation as predictors of financial restatement. Total compensation model’s prediction was lower than chance, with 67.9% of the non-restated organizations predicting correctly, 27.5% of the restated predicting correctly, and an overall success rate of 47.7%. The CEO salary as a percentage of compensation model had a slightly better prediction, but was still lower than chance, with 33.9% of the non-restated organizations predicting correctly, 65.1% of the restated predicting correctly, and an overall success rate of 49.5%.

Table 5.3 displays the regression coefficients, Wald statistics, and odds ratios for each of the four compensation components as predictors of the occurrence of restatement. One predictor significantly predict restatement according to the Wald criterion and the odds ratio. Bonus as a percentage of compensation, having a negative regression coefficient and an odds ratio well below one, is a strong, significant predictor of restatement according to the Wald statistic. For every one-unit increase of CEO bonus as a percentage of total compensation, the odds of financial restatement decrease by 86%.
Based on the results of the analysis, it appears that two of the models are better at predicting restatement versus a constant only model. CEO bonus as a percentage of total compensation is a significant predictor of restatement, CEO stock options and restricted stock as a percentage of total compensation, CEO Salary as a percentage of total compensation, and CEO total compensation are not.

5.4 THE CORRELATION BETWEEN THE CEO-BOARD RELATIONSHIP AND CEO COMPENSATION COMPONENTS

In order to test Model 3 in Chapter 3, Z-Score analysis was performed using Pearson r correlations between CEO compensation and CEO-board relationship variables from each of the restated and non-restated samples. Transformation of the samples’ Pearson r’s to Z-scores allowed for accurate comparison between correlations in the determination if there were significant differences between the two samples (Fields, 2005). In total, twenty Pearson r correlations were calculated between the CEO compensation variables and each of the CEO board-relationship variables for each sample. These correlations, as well as the Z-scores, can be seen in Table 5.4 below.
<table>
<thead>
<tr>
<th>Variables</th>
<th>$r$ - Restated Sample</th>
<th>$r$ - Non-Restated Sample</th>
<th>Z-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>0.08</td>
<td>(0.50)</td>
<td>0.98</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>(0.10)</td>
<td>0.01</td>
<td>(0.84)</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>0.17</td>
<td>(0.07)</td>
<td>1.78</td>
</tr>
<tr>
<td>Principal Director</td>
<td>(0.07)</td>
<td>(0.08)</td>
<td>0.08</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>(0.14)</td>
<td>0.11</td>
<td>-1.81</td>
</tr>
<tr>
<td>CEO SO + RS / Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>(0.07)</td>
<td>(0.15)</td>
<td>0.60</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>(0.06)</td>
<td>0.05</td>
<td>(0.83)</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>0.09</td>
<td>(0.21) *</td>
<td>2.22</td>
</tr>
<tr>
<td>Principal Director</td>
<td>0.08</td>
<td>0.11</td>
<td>(0.23)</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>(0.12)</td>
<td>(0.16)</td>
<td>0.30</td>
</tr>
<tr>
<td>CEO Bonus / Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>(0.05)</td>
<td>0.06</td>
<td>(0.76)</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>0.04</td>
<td>(0.13)</td>
<td>1.19</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>0.02</td>
<td>.11</td>
<td>(0.72)</td>
</tr>
<tr>
<td>Principal Director</td>
<td>0.03</td>
<td>0.09</td>
<td>(0.41)</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>0.03</td>
<td>0.11</td>
<td>(0.54)</td>
</tr>
<tr>
<td>CEO Salary / Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>0.14</td>
<td>0.21 *</td>
<td>(0.50)</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>0.02</td>
<td>0.04</td>
<td>(0.09)</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>(0.09)</td>
<td>0.30 **</td>
<td>(2.91)</td>
</tr>
<tr>
<td>Principal Director</td>
<td>(0.02)</td>
<td>(0.17)</td>
<td>1.08</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>0.16</td>
<td>0.08</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Notes: *p < .05  **p < .01  ***p < .0025  Nrestate = 109  Nnon-restate = 109
Only one of the twenty sets of Pearson $r$ correlations produced significant $Z$-scores. CEO salary as a percentage of compensation and the percentage of board members elected during the CEO tenure produced a significant negative $Z$-score when comparing restated and non-restated samples. These variables had a relatively low negative correlation in the restated sample; however the non-restated sample had a moderate significant positive correlation, yielding a significant negative difference between the two sample populations. Therefore, the non-restated population is much more likely to have a positive relationship between CEO salary as a percentage of total compensation and the percentage of board members elected during the CEO tenure.

There were no significant $Z$-scores when comparing the correlations between CEO total compensation, CEO stock options and restricted stock as a percentage of compensation, or CEO bonus as a percentage of compensation and the CEO power and influence variables. Therefore, there were no significant differences between the restated and non-restated samples for these variables.

### 5.5 Differences in the Combined Effects of CEO Compensation and CEO-Board Relationship Variables

Logistic regression analyses were performed on the prediction of the occurrence of financial restatement as a function of the combined dimensions of CEO compensation and CEO-Board relationship; including the combination of stock options and restricted stock as a percentage of total CEO compensation and the CEO-Board relationship variables, bonuses as a percentage of total CEO compensation and the CEO-Board relationship variables, salary as a percentage of total CEO compensation and the CEO-
board relationship variables, and total CEO compensation and the CEO-board relationship variables. The results of the analysis can be seen in Table 5.5 below.

**TABLE 5.5**

Logistic Regression Analysis of CEO Compensation Components with Board Variables as Predictors of Financial Restatement

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>Wald Test (z - ratio)</th>
<th>Odds Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>.00</td>
<td>2.15</td>
<td>1.00</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>.00</td>
<td>0.25</td>
<td>1.00</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>.00</td>
<td>2.83</td>
<td>1.00</td>
</tr>
<tr>
<td>Principal Director</td>
<td>.00</td>
<td>.39</td>
<td>1.00</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>.00</td>
<td>.00</td>
<td>1.00</td>
</tr>
<tr>
<td>CEO SO + RS / Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>4.09</td>
<td>8.09</td>
<td>59.51</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>(0.15)</td>
<td>.10</td>
<td>.86</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>1.76</td>
<td>9.49 *</td>
<td>5.84</td>
</tr>
<tr>
<td>Principal Director</td>
<td>.41</td>
<td>1.09</td>
<td>1.51</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>.03</td>
<td>.53</td>
<td>1.03</td>
</tr>
<tr>
<td>CEO Bonus / Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>(3.47)</td>
<td>1.77</td>
<td>.03</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>(2.92)</td>
<td>5.12</td>
<td>.05</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>(1.58)</td>
<td>2.43</td>
<td>.21</td>
</tr>
<tr>
<td>Principal Director</td>
<td>(0.96)</td>
<td>1.03</td>
<td>.38</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>(0.21)</td>
<td>6.32</td>
<td>.81</td>
</tr>
<tr>
<td>CEO Salary / Total Compensation X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Insiders on the Board</td>
<td>(0.17)</td>
<td>.01</td>
<td>.85</td>
</tr>
<tr>
<td>CEO/Chair Duality</td>
<td>(1.65)</td>
<td>1.42</td>
<td>.19</td>
</tr>
<tr>
<td>% Board Tenure</td>
<td>(1.00)</td>
<td>1.00</td>
<td>.37</td>
</tr>
<tr>
<td>Principal Director</td>
<td>(0.88)</td>
<td>1.03</td>
<td>.42</td>
</tr>
<tr>
<td>Average Tenure</td>
<td>(0.08)</td>
<td>1.05</td>
<td>.92</td>
</tr>
</tbody>
</table>

Notes: *p < .0025  N = 218
Consistent with the logistic regression analysis run in Section 5.4, CEO total compensation and CEO salary as a percentage of total compensation had ineffective models in predicting restatement when combined with CEO-Board relationship variables. Surprisingly, CEO bonus as a percentage of compensation did not have any significant predictors of financial restatement when combined with CEO-Board relationship variables, however, CEO stock options and restricted stock as a percentage of compensation had a statistically significant prediction of restatement when combined with the percentage of board members brought onto the board under the current CEO. When examining this model, 49.5% of the restated organizations predicted correctly, 62.4% of the non-restated organizations predicted correctly, and it had an overall success rate of 56.0%. This model predicted restatement better than the constant-only model, as the constant-only models had overall success rates of 50%, equal to chance. Weaker models with insignificant results were found with other combinations of CEO stock options and restricted stock as a percentage of compensation and CEO bonus as a percentage of compensation as predictors of financial restatement, despite significant results for these variables in Section 5.4.

Table 5.5 displays the regression coefficients, Wald statistics, and odds ratios for each of the four compensation components combined with CEO-board relationship variables as predictors of the occurrence of restatement. CEO stock options and restricted stock as percentage of total compensation combined with the percentage of board members brought on to the board under the current CEO is also a strong, significant predictor, with a positive regression coefficient and an odds ration well above one. An organization is 5.84 times more likely to restate its financials with every one-unit increase
of the combined effect of CEO restricted stock and stock option with a greater percentage of board members brought on by the current CEO.

Based on the results of the analysis, it appears that CEO stock options and restricted stock as a percentage of total compensation combined with the percentage of board members brought on by the current CEO is the only model better at predicting restatement versus a constant only model. Any CEO board-relationship variable combinations with CEO Salary as a percentage of total compensation, CEO bonus as a percentage of total compensation, and CEO total compensation are not significant predictors of restatement.

5.6 CONCLUSION

The results of the study provide deeper insight into the relationship between governance mechanisms and the propensity to restate financials. Overall, the analyses have indicated that there is a significant relationship between CEO compensation components and financial restatement. The CEO bonus as a percentage of total compensation model significantly predict financial restatement. Alone, the CEO-board relationship variables have not provided significant results in predicting financial restatement, however, when analyzing these variables with CEO compensation components, further insight into the relationship between restatement and governance combinations has been gained. Analysis has shown that there are significant differences between restated and non-restated organizations when looking at the relationship between the number of board members brought onto the board under the current CEO and CEO
Salary as a percentage of total compensation. In addition, when looking at the combined effects of the CEO-board relationship and CEO compensation variables, significant results have been found when analyzing CEO stock options and restricted stock as a percentage of total compensation and the percentage of board members brought onto the board under the current CEO. Further discussion of these results and their application to the hypotheses and models discussed in Chapter 3 can be found in Chapter 6.
CHAPTER SIX: CONCLUSION

6.0 PROLOGUE

This chapter presents a summary, application, and discussion of the major findings of this study, as well as its limitations and future research implications in four primary sections. Section 6.1 provides a summary of the research findings and their application to the models and hypotheses discussed in Chapter 3. Section 6.2 discusses the implication of these findings. Section 6.3 discusses the limitations of this research, followed by future research implications in section 6.4, and a conclusion in section 6.5.

6.1 SUMMARY OF THE FINDINGS

The results and their application to each model and hypothesis discussed in Chapter 3 can be found below in Table 6.1. None of the hypotheses proposed in the discussion of Model 1 were supported by this research using logistic regression between a matched pair sample of restated organizations. A significant result was found when analyzing model 2. CEO bonus as a percentage of total compensation was a significant predictor of financial restatement, however, Hypothesis 2b was not supported because the findings indicated that higher levels of CEO bonus as a percentage of total compensation would decrease the likelihood of financial restatement. One hypothesis was supported when operationalizing Model 3. Hypothesis 3i was supported, providing strong evidence that organizations with restated financial statements will have a significantly lower negative correlation between CEO salary as percentage of total compensation and the percentage of board members brought on to the board during the CEO’s tenure, than
organizations that have not restated their financials. Finally, one hypothesis was supported when operationalizing the variables in Model 4. Hypothesis 4f was supported as the findings indicated that organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.

Table 6.1

<table>
<thead>
<tr>
<th>Summary of Findings Model 1</th>
<th>Hypothesis</th>
<th>Literature Finding</th>
<th>Statistical Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: Organizations that have restated their financials will have a significantly higher percentage of insiders on the board than organizations that have not restated.</td>
<td>Not Supported**</td>
<td>Not Supported</td>
<td></td>
</tr>
<tr>
<td>H1b: Organizations that have restated their financials will have a significantly higher likelihood of CEO/Chair duality than organizations that have not restated.</td>
<td>Not Supported**</td>
<td>Not Supported</td>
<td></td>
</tr>
<tr>
<td>H1c: Organizations that have restated their financials will have a significantly higher percentage of board members brought on to the board during the CEO’s tenure than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
<td></td>
</tr>
<tr>
<td>H1d: Organizations that have restated their financials will have significantly lower board tenure than organizations that have not restated.</td>
<td>Supported</td>
<td>Not Supported</td>
<td></td>
</tr>
<tr>
<td>H1e: Organizations that have restated their financials will have a significantly lower likelihood of having a principal director on the board than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
<td></td>
</tr>
</tbody>
</table>

Table 6.2

<table>
<thead>
<tr>
<th>Summary of Findings Model 2</th>
<th>Hypothesis</th>
<th>Literature Finding</th>
<th>Statistical Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2a: Organizations with restated financial statements will have a significantly higher percentage of CEO stock options and restricted stock as a percentage of compensation than organizations that have not restated their financials.</td>
<td>Supported</td>
<td>Not Supported</td>
<td></td>
</tr>
<tr>
<td>H2b: Organizations with restated financial statements will have significantly higher CEO bonuses as a percentage of compensation than organizations that have not restated their financials.</td>
<td>Supported</td>
<td>Not Supported (Significant in the Opposite Direction)</td>
<td></td>
</tr>
<tr>
<td>H2c: Organizations that have restated their financial statements will have a lower percentage of CEO base salary as a percentage of total compensation than those organizations that have restated their financials.</td>
<td>Supported</td>
<td>Not Supported</td>
<td></td>
</tr>
<tr>
<td>H2d: Organizations that have restated financial statements will have a significantly higher level of CEO total compensation than those organizations that have not restated their financials.</td>
<td>Supported</td>
<td>Not Supported</td>
<td></td>
</tr>
</tbody>
</table>
### Summary of Findings Model 3

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Literature Finding</th>
<th>Statistical Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3a: Organizations with restated financial statements will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and board independence, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3b: Organizations with restated financial statements will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and CEO/Chair duality, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3c: Organizations with restated financial statements will have a significantly higher positive correlation between CEO bonuses as a percentage of compensation and the percentage of insiders on the board, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3d: Organizations with restated financial statements will have a significantly higher positive correlation between CEO bonuses as a percentage of compensation and CEO/Chair duality, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3e: Organizations with restated financial statements will have a significantly higher positive correlation between CEO salary as percentage of total compensation and the percentage of insiders on the board, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3f: Organizations with restated financial statements will have a significantly higher positive correlation between CEO salary as percentage of total compensation and CEO/Chair duality, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3g: Organizations with restated financial statements will have a significantly lower negative correlation between CEO bonuses as a percentage of compensation and the percentage of insiders on the board, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3h: Organizations with restated financial statements will have a significantly lower negative correlation between CEO bonuses as a percentage of compensation and CEO/Chair duality, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3i: Organizations with restated financial statements will have a significantly lower negative correlation between CEO total compensation and the percentage of insiders on the board, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Supported</td>
</tr>
<tr>
<td>H3j: Organizations with restated financial statements will have a significantly lower negative correlation between CEO total compensation and CEO/Chair duality, than organizations that have not restated their financials.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3k: Organizations that have restated their financials will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and board independence, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3l: Organizations that have restated their financials will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and board tenure, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3m: Organizations that have restated their financials will have a significantly higher positive correlation between CEO stock options and restricted stock as a percentage of compensation and the existence of a principal director on the board, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3n: Organizations that have restated their financials will have a significantly lower negative correlation between CEO stock options and restricted stock as a percentage of compensation and the existence of a principal director on the board, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3o: Organizations that have restated their financials will have a significantly lower negative correlation between bonuses as a percentage of compensation and board tenure, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3p: Organizations that have restated their financials will have a significantly lower negative correlation between bonuses as a percentage of compensation and the existence of a principal director on the board, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3q: Organizations that have restated their financials will have a significantly lower negative correlation between salary as a percentage of compensation and board tenure, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3r: Organizations that have restated their financials will have a significantly lower negative correlation between salary as a percentage of compensation and the existence of a principal director on the board, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3s: Organizations that have restated their financials will have a significantly lower negative correlation between total CEO compensation and board tenure, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3t: Organizations that have restated their financials will have a significantly lower negative correlation between total CEO compensation and the existence of a principal director on the board, than organizations that have not restated.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>Literature Finding</td>
<td>Statistical Finding</td>
</tr>
<tr>
<td>------------</td>
<td>--------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>H4a: Organizations that have a higher percentage of insiders on the board and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4b: Organizations that have a higher percentage of insiders on the board and higher levels CEO bonuses as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4c: Organizations that have a higher percentage of insiders on the board and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4d: Organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4e: Organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of CEO bonuses as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4f: Organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4g: Organizations that have CEO/Chair duality and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Supported</td>
</tr>
<tr>
<td>H4h: Organizations that have CEO/Chair duality and higher levels of CEO bonuses as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4i: Organizations that have CEO/Chair duality and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4j: Organisms that have a higher percentage of insiders on the board and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4k: Organizations that have a higher percentage of board members brought on to the board during the CEO's tenure and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4l: Organizations that have CEO/Chair duality and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4m: Organizations that have a principal director and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4n: Organizations that have a principal director and higher levels of CEO bonuses as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4o: Organizations that have a principal director and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4p: Organizations that have longer board tenure and higher levels of total CEO compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4q: Organizations that have longer board tenure and higher levels of CEO bonuses as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4r: Organizations that have longer board tenure and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4s: Organizations that have a principal director and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4t: Organizations that have longer board tenure and higher levels of CEO salary as a percentage of total compensation will have a significantly decreased likelihood of financial restatement.</td>
<td>Not Reported in Literature</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>

** When analyzing businesses that restated in the prior year
6.2 IMPLICATIONS

This research utilized a matched pair sample of restated and non-restated Fortune 500 companies, analyzing the relationship between CEO-board relationship and CEO compensation variables. Significant results were found in this study, confirming the correlation between potential toxic governance combinations and the propensity for an organization to restate their financials. This study has important implications for research and business.

Strong evidence of the correlation between various governance mechanisms and financial restatement was found in three of the four models analyzed from Chapter 3. Models 2, 3 and 4 each produced significant findings, however, Model 1, analyzing the CEO-board relationship and its influence on financial restatement, did not yield statistical support. These findings indicated that CEO-board relationship variables alone, have no influence on risk of financial restatement and further analysis of their influence when paired with compensation variables was needed.

While Model 1 did not produce any significant outcomes, it did generate a few results that were inconsistent with prior literature. These discrepancies may be attributed to the timing of data collection, as well as the result of changes in legislation and stock exchange requirements. For example, many of the studies chose samples that were drawn from a database that included restatements pre-2002 (Dey, 2008; Donoher, Reed, & Storud-Barnes, 2007; Efendi, Srivastava, & Swanson, 2007). This time frame would have included restatements that were made prior to the enactment of the Sarbanes-Oxley Act, changes in the requirements for listing on many of the larger stock exchanges, and the
implementation of the recommendations of the Public Company Accounting Oversight Board. These powerful changes encouraged or required organizations to make significant alterations in board structure, such as the recommendation of a principal director, modification of committees and board size, and recommendations for limiting insiders on the board. These changes could have had a significant influence on the analysis of variables in this study, as organizations had only just begun to apply and report these changes, yet the effect of the change may not have been fully realized. This gap in reporting and realization may have modified and created differences between the results in this study and prior literature. In addition, the difference in results between prior literature and this study could also be attributed to the timing in data collection. The variables in this study were analyzed by collecting information from the organization during the actual restatement year, whereas in prior literature, a few studies used data from years prior to or after the organization restated (Donoher, et al., 2007) or the announcement year (Efendi, et al., 2007). These differences, particularly when studies collect data after the organization has restated, would have allowed a modification of board structure. This creates a difference in the variables being studied, as well as their outcomes.

Model 2 produced a significant result when analyzing CEO compensation variables and their influence on financial restatement. Organizations that have not restated their financials have significantly higher levels of CEO bonus as a percentage of total compensation than organization that have restated their financials. This is contrary to Hypothesis 2b and implications found in prior literature. A number of studies have examined managers’ motivation to manipulate earnings due to the influence of short-term
bonuses and have found they are tempted to manipulate earnings or smooth earnings in order to consistently perform and receive their bonuses (Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Healy, 1985; Holthausen, Larker & Sloan, 1995).

The finding in this study is particularly interesting, as it is a deviation from the aforementioned studies and the sample population was not impacted by the recently implemented claw-back provision found in the Dodd-Frank Wall Street Reform and Consumer Protection Act. Possible reasons for the discrepancy with prior literature may include the difference in samples, as the regulatory environment surrounding the Sarbanes-Oxley Act may have heavily influenced the sample in this study, whereas the prior literature used samples pre-Sarbanes Oxley. Further, when comparing long-term and short-term compensation components, validation of the use of bonuses over stock as compensation becomes more evident. The financial incentive to manipulate earnings to have continuous and consistent growth appears to be less with bonuses, as, in general, the bonus is not correlated to the long-term stock price. Therefore, the risk to manipulate earnings appears to be too great for CEOs looking to gain short-term compensation bonuses. Based upon the overall results of this model, businesses should be more inclined to offer higher levels of bonuses in their CEO compensation packages, in order to reduce the risk of financial restatement.

Model 3 produced one significant finding when assessing the differences in the relationship between CEO compensation and CEO-board relationship variables between restated and non-restated organizations. Hypothesis 3i was supported, providing strong evidence that organizations with restated financial statements will have a significantly lower negative correlation between CEO salary as percentage of total compensation and
the percentage of board members brought on to the board during the CEO’s tenure, than organizations that have not restated their financials.

This finding reveals the unique relationship between governance mechanisms and their differences between restated and non-restated organizations, specifically the relationship between salary and the power of a CEO over board membership. These two variables, when combined, have inherently opposing risks. Salary, a short-term component of a compensation package, is not performance-based and is therefore, not dependent on the future long-term or short-term performance of the organization. When base salary is a large portion of total compensation, there is an increased risk of a lower total compensation. Further, prior research has indicated that the board’s relative power over executives may be compromised if the CEO has been responsible for the appointment of many members to the board (Daily & Schwenk, 1996). This risks a transformation of the board’s duty of loyalty from the organization to the CEO when a majority of the board members have been brought onto the board under his or her tenure. Assessing these risks together reveal the opposing nature of these two governance mechanisms and the possible duplicity of the board, as board members’ loyalty to the CEO will seduce them to provide the highest possible compensation, minimizing salary and increasing performance incentives. This, paired with the inherent risk of restatement associated with incentive compensation (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Gaver, Gaver & Austin, 1995; Guidry, Leone & Rock; 1999; Harris & Bromiley, 2007; Healy, 1985; Holthausen, Larker & Sloan, 1995), would indicate that the relationship between CEO salary as a percentage of total compensation and the percentage of board members brought on to the board under the current CEO’s tenure
would be significantly less for restated organizations, as supported by this finding.
Further discussion and implications are discussed in conjunction with the finding in Model 4.

Model 4 produced one significant finding when analyzing the combined effect of CEO compensation and CEO-board relationship variables and the propensity to restate financials. Hypothesis 4f was supported as the findings indicated that organizations that have a higher percentage of board members brought on to the board during the CEO’s tenure and higher levels of CEO restricted stock and stock options as a percentage of total compensation will have a significantly higher likelihood of financial restatement. This result is consistent with the discussion in support of Model 3’s finding and further validates the known risk of maintaining higher levels of stock options and restricted stock in a CEO’s compensation package (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007). Stock options and restricted stock are used in incentive packages to improve overall firm performance, however this heightens the risk of earnings management (Bauman & Shaw, 2006; Beneish & Vargus, 2002; Myers, Myers & Skinner, 2007), as well as financial restatement (Cheng & Farber, 2008; Efendi, Srivastava, & Swanson, 2007; Harris & Bromiley, 2007). This, when combined with the risk a board’s transformation from a duty of loyalty from the organization to the CEO when a majority of the board members have been brought onto the board under the his or her tenure, reveals the dynamic nature of the combination of these two governance mechanisms, as well as the severe consequences, as demonstrated by this finding.

The implications of the findings from Models 3 and 4 are clear. Stakeholders should be aware of an organization’s board members, structure, and the compensation
packages it provides to its executives. If an organization has a high proportion of board members brought on by the current CEO and offers very little salary, but higher levels of incentive compensation, these findings indicate that this is a toxic governance combination, and is more likely to occur in an organization that restates its financials. Further, boards should be aware of the consequences of their actions when developing compensation packages, as well as the duty of loyalty they should have to their organizations and the stakeholders dependent on them.

6.3 LIMITATIONS

Limitations of this research must be acknowledged when applying its results. The primary limitation of this study is causality and the inability to establish internal validity. This research focuses on the relationships between financial restatement, CEO-board relationship variables, and CEO compensation components. It has not established that changes in CEO-board relationship variables or CEO compensation components are causes of financial restatement, as correlational data has been collected at only one point. There is no covariation of the cause and effect and as such, there is also no way to determine temporal precedence of the CEO’s board relationship or compensation component as cause of financial restatement, nor is there any way to rule out plausible alternative explanations for the results. This does not, however, diminish the conclusions drawn from this study; strong significant results were found in the analyses, providing researchers and practitioners valuable guidance about the relationships between governance mechanisms and the propensity to restate financials.

Another possible limitation of this study stems from the sample population and its generalizability. The study’s sample includes Fortune 500 companies that were publically
traded from 2002-2006. It is possible that there may be a risk of generalizability to non-publicly traded organizations, however, this study includes a broad spectrum of organizations within different industries and is not limited to one specific domain of business. Therefore, this study may be generalizable to organizations that are not publicly traded, but are of same scope and size that have separation of ownership and control.

6.4 RECOMMENDATIONS FOR FUTURE RESEARCH

Four avenues for future research may provide clarification and further insight into the relationship between governance combinations and the propensity for an organization to restate its financials. First, a longitudinal study could provide further insight into the changes organizations make in governance combinations surrounding a restatement incident. It would be worthwhile to gather data over a period of five years, two years prior to restatement, restatement year, and two years post restatement, in order to assess governance changes or combinations as a possible cause for restatement. In addition, this would provide insight into governance changes post restatement, advancing our knowledge of perceived and actual effective governance combinations.

Second, this study examined one restatement incident per organization. An organization could restate multiple times over a period of years. A multi-year study of organizations with multiple restatement events compared to an organization with no restatement over the same period of time could provide further insight into the relationship between governance mechanisms over a period of time causing restatement. In addition, it would provide further evidence as to which governance combinations firms continually choose and its relationship to restatement.
Third, it would be worthwhile to follow pairs of companies in the same industry through observational data, financial reporting, interviews with employees and board members, surveys, and business and academic literature relating to restatement and corporate governance mechanisms. This would provide rich, qualitative context to the quantitative analysis performed on the pairs of restated and non-restated organizations, as well as further insight as to the overall effectiveness of governance combinations.

Finally, in order to expand the analysis across industries, organizational size, and geography, it would be interesting to see how organizations of all size and location create governance combinations and their influence on financial restatement. Organizations of all size compete globally and have numerous stakeholders dependent upon their success. This research would take a great deal of effort in data collection, survey analysis, business and academic literature analysis, as well as studies of the governance regulations in various countries. It would, however, be fascinating to assess organizations’ governance structure, their effectiveness at preventing financial restatement, and the laws and regulations associated with their structure and compliance.

6.5 CONCLUSION

This research is a valuable contribution to the body of governance literature. It provides evidence of the relationship between governance combinations and the propensity to restate financials. This study has found that the composition of compensation packages has a significant influence on the risk of financial restatement, especially when combined with a board that has a significantly higher percentage of members brought on to the board during the CEO’s tenure.
The implications of the results of this study provide meaningful guidance. Boards, investors, and all stakeholders should be aware of an organization’s board members, board structure, and the compensation packages it provides to its executives. If an organization has a high proportion of board members brought on by the current CEO and offers very little salary, but higher levels of incentive compensation, this research indicates that this is a toxic governance combination, and is more likely to occur in an organization that restates its financials. Further this research recommends that boards be aware of the consequences of their actions when developing compensation packages, as well as the duty of loyalty they should have to their organizations and the stakeholders dependent on their decisions.


Stuart, A. 2010. Restatements on the decline. CFO.com (March 4). Available at:
http://www.cfo.com/article.cfm/14480266


