HEC Montréal
Affiliée à l'Université de Montréal

CEO Compensation and CEO influence over their Board of Directors before and after the Great Recession

Par
Ahmad Ahmad

Science de la gestion
(option Finance)

Mémoire présenté en vue de l'obtention du grade de
Maitrise ès sciences en gestion
(M. Sc.)

Avril 2015

ABSTRACT

The main idea of this thesis is to observe the effects of a financial crisis on executive compensation and on the power that CEOs exert over their boards of directors. We want to observe if social pressures (the Occupy Wall Street movement) and new regulations (Dodd-Frank act) had any effects on the way executives are compensated. With 10,624 observations of CEO-firm-years spanning from 2000 until 2013, we attempt to observe two variables (CEO compensation and CEO power over their boards of directors) for four different segments: (1) pre-crisis and urban firms, (2) pre-crisis and rural firms, (3) post-crisis and urban firms, and (4) post-crisis and rural firms. These four segments will enable us to integrate the aspect of geography in our study.

Using the Jensen and Murphy pay-performance sensitivity method, we find that the salary and bonus sensitivity decreases after the financial crisis. Furthermore, firms located in rural areas seem to have compensation packages that are more in line with shareholder interests, which supports previous claims that smaller firms are more pay-performance sensitive than larger firms. We arrive at the same conclusions when using the difference-in-differences method. After the financial crisis, firms operating in urban areas see their CEO compensation decrease on average by 4%, while direct compensation (salary and bonus) decreases by 3%.

To observe the power that CEO's exert over their board of directors, we constructed a "power index" inspired by the work of Adams, Almeida and Ferreira (2004). Using the difference-in-differences regression model, we obtain a reduction of 4% in power post-crisis for CEO's in urban environment.

Keywords: CEO compensation, corporate governance, Power over board, Geography.

SOMMAIRE

L'idée principale de cette thèse est d'observer les effets d'une crise financière sur la rémunération des dirigeants et de la puissance que les dirigeants exercent sur leurs conseils d'administration. Nous voulons observer si les pressions sociales (Occupy Wall Street mouvement) et de nouvelles réglementations (loi Dodd-Frank) avaient des effets sur la façon dont les cadres sont compensées. Avec 10 624 observations de CEO-firmes-années couvrant de 2000 à 2013, nous tentons d'observer deux variables (la rémunération du PDG et l'influence du PDG sur leurs conseils d'administration) pour quatre segments différents: (1) les entreprises urbaines avant la crise, (2) les entreprises rurales avant la crise, (3) les entreprises urbaines d'après-crise, et (4) les entreprises rurales d'après-crise. Ces quatre segments vont nous permettre d'intégrer l'aspect de la géographie dans notre étude.

En utilisant la méthode de sensibilité de paie et de la performance de la firme de Jensen et Murphy, nous constatons que le salaire et la prime de sensibilité diminue après la crise financière. En outre, les entreprises situées dans les zones rurales semblent avoir des régimes de rémunération qui sont plus en ligne avec les intérêts des actionnaires, qui soutient des études précédentes. De plus, nous arrivons aux mêmes conclusions en utilisant la méthode de la différence des différences. Après la crise financière, les entreprises opérant dans les zones urbaines voient une baisse de la rémunération des PDG en moyenne de 4%, tandis que la rémunération directe (salaire et primes) diminue que de 3%.

Pour observer la puissance que les dirigeants exercent sur leur conseil d'administration, nous avons construit un «indice de puissance", inspiré par le travail de Adams, Almeida et Ferreira (2004). En utilisant le modèle d'écart dans les différences de régression, on obtient une réduction de 4% de la puissance de sortie de crise pour les dirigeants en milieu urbain.

Mots-clés: Rémunération des PDG, la gouvernance d'entreprise, Influence des PDG, Géographie.

ACKNOWLEDGEMENT

A long journey is coming to an end and allowing a new beginning to take place. This has been possible only thanks to the love and support of my family and friends. I would especially like to thank my amazing family for the love, support, and constant encouragement I have gotten over the years. In particular, I would like to thank my mother Loulou, and my brothers, Hussein and Mohammad. I could not have asked for a better family. You are what keep me going.

I would like to thank my director, Decio Coviello for guiding and supporting me throughout the process. You have set an example of excellence as a researcher, mentor, instructor, and role model.

To my girlfriend, Pooja Kapoor, I cannot imagine going through this phase of my life without you. You have been there since day one showering me with love and support. I cannot thank you enough for being part of my life. You are the source of my strength and courage. I love you.

A special thanks to my closest friends. Sammy Najar, our friendship is very dear to me. You are my inspiration for returning on a forgotten path and completing my education. Sean Masson, thank you for being a loyal and great friend over the years. Soufian Zitouni, no one ever makes me laugh as much as you do. Thank you for lifting my spirits on rainy days and always giving me great advice.

TABLE OF CONTENTS

1. INTRODUCTION

The 1970s saw the emergence of an aggressive economic strategy on Wall Street. Executives, CEOs and other big players of the financial industry began to produce substantial profit by inducing a company to take over another company at an increasing bid war. The appeal of this take-over tactic spread and soon CEOs of big firms were being paid to go ahead with such transactions in exchange for substantial sums of money or stock options. These forms of compensation quickly became the norm on Wall Street and brought about a wave of short term thinking in the financial industry as the demand for higher forms of compensation grew. Whereas a hedge fund manager going home with a yearly income of millions of dollars was once considered to be a rare phenomenon, this level of compensation became the norm and standard on Wall Street. Some CEOs were earning 130 times more than their lowest paid employees; the pay gap between executives and employees was ever-increasing (Brownstein and Panner, 1992).

The 1970s ended but the aggressive economic attitude that the decade had fostered remained. The thirst for higher levels of compensation grew until it became insatiable. Wall Street became the hotbed for bold investment strategies and sometimes unethical business decisions. Eventually, this brought about disastrous economic events which include the bursting of the dotcom bubble in 2000 and the corporate scandals which triggered the collapse of companies such as Enron and WorldCom. Both events resulted in massive shareholder losses.

The most recent economic disaster and crowning jewel of this lengthy downward spiral has been the mortgage crisis of 2008, in which even the iconic Lehman Brothers were not spared. This crisis triggered the biggest government bailout in history at the expense of many shareholders and the general population. While firm executives were going home with millions of dollars in year-end bonuses and other forms of compensation, “average Joe” was losing his job, his home and the means to support his family[1].

[1] Hennessey, Thomas. "What Caused the Financial Crisis?" *Wall Street Journal*

The financial crisis of 2008 reignited the topic of executive compensation and corporate governance in North America. Murphy (2012) shows that inflation-adjusted median CEO compensation at S&P 500 firms increased from $2.9 million in 1992 to about $9.0 million in 2011. This represents a real growth rate in U.S. CEO compensation of approximately four percent per annum for almost 30 years. The events described above culminated in the creation of the “Occupy Wall Street” movement. This movement began on September 17, 2011 in New York City’s financial district and raised the issues of social and economic inequality. The movement openly condemned greed, corruption and the perceived influence of financial institutions on the government.

The issue of executive compensation has become so prevalent that its weight in politics has increased noticeably. In his 2010 political campaign, the U.S. President Barack Obama proposed tighter regulations on executive compensation. However, he also said he did not begrudge the bonuses that executives in the financial industry are paid as ‘they are very savvy businessmen and some athletes earn more’ (Heneghan, 2010). Although it may not have been the goal, this statement lends itself towards the notion that despite the level of scrutiny upon them, the top dogs of finance may always enjoy a certain level of freedom when it comes to their actions and compensation.

A curious fact to note is that it was mostly Wall Street executives that were targeted by the media and the “Occupy Wall Street” movement while the executives of firms in smaller/rural areas were barely heard of after the financial crisis of 2008. Research studies supporting a connection between firm location and CEO compensation are present in the context of financial misreporting (Kedia and Rajgopal, 2005), divestiture and employee layoffs (Landier Nair and Wulf, 2006), financial decisions (Loughran and Schultz, 2007) and divisional expansion (Gao, Ng and Wang, 2006). Yet despite the increase in the popularity of studies on executive compensation, the effects of geography remain largely unexplored. This paper illuminates whether the emplacement of a firm will affect an executive’s compensation after an economic shock by comparing the compensation of CEOs operating in rural areas with those operating in bigger financial centers for two different periods: pre- and post-crisis.

It is reasonable to assume that the level of freedom enjoyed by CEOs in the financial industry and the hefty compensation packages that accompany their positions

are related to the power that they may exert over their board of directors. Following the events of the great depression, the notion of a CEOs' power over their boards, which encompasses influence over the board's decision regarding the CEO's compensation and incentives received, became a topic of analysis. According to Bebchuk and Fried (2003), the amount of power that CEOs can have over their board of directors can be a significant factor in determining the executive's compensation. As mentioned earlier, executives will tend to make decisions which will benefit themselves, by focusing on short-term results and by engaging the company in ventures that do not necessarily add value to the shareholder.

This short-sightedness gave rise to the Dodd–Frank Wall Street Reform and Consumer Protection Act which was signed by President Obama in July of 2010. This act was passed to promote the financial stability of the United States by improving accountability and transparency in the financial system, to end "too big to fail", to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes[2]. Not only does the act encourage the underlying message that members of the financial industry will be held accountable for their actions but many of the provisions are aimed towards protecting the integrity of the financial system as a whole and shareholders. Some provisions are focused specifically on limiting the power that an executive can have over his board.

This paper will add to the existing studies on CEO compensation by observing if the compensation/firm performance sensitivity of CEOs throughout North America has varied post the 2008 financial crisis as a result of factors such as the added attention and pressures from economic reform. Additionally, this paper will add value to the existing literature of CEO power and their influence over their Board of Directors by taking into consideration changes that have occurred which directly affect a CEO's powers. As previously mentioned, the emplacement of a firm will also be considered as both elements mentioned will be analyzed geographically (ie. pre-crisis urban and rural firms and post-crisis urban and rural firms). It is hypothesized that CEO compensation

[2] "Dodd–Frank Wall Street Reform and Consumer Protection Act (Enrolled Final Version – HR 4173)". THOMAS. Retrieved July 20, 2010.)

and power in urban areas has decreased more than those in rural areas following the events of the 2008 financial crisis.

In keeping with the described objectives, this study will observe the effects of an economic shock on the pay-performance sensitivity and on the power that CEO's exert over their boards for firms in both urban and rural emplacement. To do so, we will manipulate data to differentiate between firms in rural and urban areas. Jensen and Murphy's regression analysis and the difference in differences regression methods will be used to observe if the 2008 financial crisis had any effects on our variables of interest. This paper proceeds as follows. In section 2, we will go over the existing literature on executive compensation with regards to performance and geography followed by the literature portraying the power of the CEOs over the Board of Directors. Section 3 presents the hypotheses made followed by section 4 which includes a description of the data used. The methodology and results will be presented in section 5 and we will conclude in section 5.

2. LITERATURE REVIEW

2.1 Studies evaluating compensation vs. performance related variables

2.1.1 CEO compensation and firm performance

An agency problem occurs when one party, the principal, delegates decision-making responsibility to another party, the agent, and where the agent's efforts are not directly observable. The shareholders of a firm (principal) will delegate the responsibility of making decisions that will increase their wealth to a team of executives (the agent). A problem arises when the management team makes decisions which do not serve this purpose. According to standard agency theory, the compensation scheme must be a function of the agent's performance to provide incentives for the agent to work in the interest of the principal. Jensen and Meckling (1976) stress that this agency problem is the main obstacle to effective corporate governance. In this context, the executive's compensation appears to be the medium to discipline the CEO's actions and to align his interests to those of the shareholders. However, since the information that is available to shareholders is limited, the compensation scheme will not be the perfect solution to this conflict of interest.

Past research on this topic was focused on evaluating if a positive relationship existed between CEO compensation and the performance of the firm. Eventually it evolved to studying the magnitude of this relationship which entailed debate between two schools of thought. On one side of the debate, there are those who believe that pay arrangements are produced by "arm's-length bargaining" – contracting between executives attempting to get the best possible deal for themselves and boards trying to get the best deal for shareholders. On the other end, there are those who believe that boards are controlled by powerful CEOs who strongly influence their own pay incentives – the managerial power.

2.1.2 Observation of a relationship between compensation and other variables

There has been an explosion in academic research on executive compensation in the past 50 years. Only a handful of studies were published prior to 1980 and mostly

focus on determining if a relationship existed between compensation and firm size or profitability. Lewellen and Huntsman (1970) found a significant and positive relationship between the CEO's compensation and his firm's net profits. Prior studies seeking to determine the presence of this relationship can be considered less precise since they only used base salary and bonus to measure the compensation of the CEO (McGuire, Chui and Elbing(1962), Roberts(1956)). Other forms of remuneration such as pension benefits, deferred pay, qualified profit-sharing plans, stock ownership and stock options have been completely overlooked. These earlier studies would lead us to observe an absent or weak relationship between compensation and profits. Furthermore these earlier studies use accounting information to measure profitability resulting in measurement errors and the empirical results are biased due to omitted variables and multicollinearity (Ciscel and Carroll, 1980).

The modern history of executive compensation research began in the 1980s. These studies were mainly focused on documenting the relation between compensation and firm performance. Coughlan and Schmidt (1985), in their study, conclude that the firm's board creates managerial incentives consistent with those of the firm's shareholders using 249 executives from 249 companies over 4 years. Many came to this same conclusion during the 1980s (Murphy, 1985, 1986; Abowd, 1990; Jensen and Murphy, 1990a; Leonard, 1990) which reinforced/confirmed the relation between executive compensation and firm performance.

2.1.3 Pay without performance

In the early 1990s, the relation between financial performance and the remuneration of CEOs was repeatedly demonstrated empirically. Thus, researchers moved their attention to the magnitude of this relationship. Jensen and Murphy (1990a) in a revolutionary study on the subject claimed that executives were paid like bureaucrats - they receive steady compensation regardless of performance. According to their results, although a positive and significant relationship between compensation and performance existed, it is too weak to be considered a real incentive for executives to act in the best interest of the shareholders. Their results, based on a sample containing 1668 CEOs from 1049 firms between the years 1974 and 1986, are

convincing. They use a least square regression to determine the pay-performance sensitivity, such that the change in CEO salary and bonus from one year to another, results in a coefficient (degree of sensitivity) times the change in shareholder wealth for that same period. The shareholder wealth variable is defined by $r_t v_{t-1}$ where r_t is the inflation adjusted rate of return on common stock realized in fiscal year t, and v_{t-1} is the firm value at the end of the previous year. Jensen and Murphy obtain a sensitivity coefficient of 0.0000219 which means that for every $1000 increase in the shareholder wealth, the CEO pockets $0.022 in the form of salary and bonus. Furthermore, when including other forms of compensation, such as stock ownership, stock options, pay-related wealth, and threat of dismissal, the coefficient increases to 0.00325. Overall, for a $1000 increase in shareholder wealth, the CEO sees his wealth only raised by $3.25. The largest performance incentive that best aligns management and shareholder interest is the insider stockholding. However, the authors claim that such holdings are small and declining with time. Furthermore, the authors acknowledge that it is impossible for an executive to own a significant portion of a giant public company such as Google or Apple which are valued at hundreds of billions of dollars. Therefore, they argue that these companies must recognize that their size limits the incentives they can create for an executive.

More recently, Bebchuck and Fried wrote a provocative book called " Pay Without Performance". They discuss many reasons why they think the system for setting executive pay needs reorganization. Among these reasons is the failure or the limitations of the optimal contracting theory and the overriding impact of the managerial power theory. They claim that since there is no reason to assume that managers automatically seek to maximize shareholder wealth, there is no reason to expect that directors of the board, the "guardians" of shareholder interests, will either. The authors' arguments complement the findings of the earlier paper of Jensen and Murphy (1990a) and express that executive pay is insensitive to firm performance.

2.1.4 Pay with performance

Hall and Liebman in their research paper in 1998, arrive at a different conclusion from Jensen and Murphy (1990a) as they claim that executives are not paid like

bureaucrats. They document a solid relationship between firm performance and CEO compensation which is generated almost entirely by changes in the value of stock ownership and stock options. They also show that the levels of CEO compensation and the sensitivity of compensation to firm performance have risen dramatically since 1980, largely because of the increase in stock option grants. According to the authors, their results differ from Jensen and Murphy's for two reasons. First, Jensen and Murphy rely on data from a period (1968-1983) which precedes the explosion in stock option issuance that occurred during the 1980s and 1990s. Second, they claim that Jensen and Murphy focus exclusively on how CEO wealth varies relative to the change in firm value. They do not neglect the importance of this measure, but when put in isolation, it presents a misleading picture of the pay to performance relationship because of the very large denominator (the change in firm value). Hall and Liebman's dataset consists of information on 478 companies for the period 1980 to 1994. The data was collected from corporate proxies and 10-K fillings and with accounting data from Compustat. This is a big change in comparison to previous literature (including Jensen and Murphy, 1990a) which mostly used compensation data provided by the Forbes survey, which had limited information on stock holdings and stock options. Although Hall and Liebman concluded with different results from Jensen and Murphy (1990a), they do not negate their results as they were focusing on a different time period. However, they claim that an important evolution of executive compensation during the 1980s resulted in an increase in the pay-performance sensitivity measure.

Murphy (1998) similarly obtains results supporting high pay-performance sensitivity. His study was based on firms in the S&P 500 instead of firms in the Forbes 800 (used in Murphy and Jensen 1990), the pay-performance sensitivity nearly doubled to 0.00593 (or $5.93 per $1000 additional shareholder wealth) by the year 1996. Furthermore, when isolating firms with sales below the median, Murphy shows that the pay-performance sensitivity is even higher at 0.00827 supporting earlier claims that smaller firms are more pay-performance sensitive than larger firms.

2.1.5 Compensation studies evolving

After years of research on the topic of executive compensation, there is yet to be a consensus and an agreed upon methodology and conclusion on this topic. Murphy (2012) in his latest paper suggests that a more complete explanation must include the role of the government. He argues that the option explosion was in large part caused by changes to tax and accounting rules coupled with changes in disclosure, holding, and listing requirements. He claims that a government intervention has been both a cause and an effect of time tendencies in executive compensation over the past few decades, and that any explanation for incentives that overlooks political factors must be incomplete. He also makes the distinction in the different measures of total compensation used in the compensation literature by differentiating between the grant date value and the actual realized value of stock options. Previous academic research on compensation has valued the options portion of compensation at fair market value at the grant-date. When total compensation is then measured, it is routinely referred as the "expected compensation" to distinguish it from the actual pay the executive receives upon exercising his options. Murphy stresses the importance of differentiating between these two methods of accounting for this portion of incentives as they could be used for separate purposes. Compensation committees evaluating the competiveness of their CEOs compensation at the beginning of the year (before performance metrics are collected) level are more inclined to use the grant-date measure, whereas realized-pay levels are better suited for evaluating if the executive's compensation is justified by looking at past performance measurements. The latter is more suited to capture the relation of CEO compensation and firm performance. When making this distinction, he finds that the average grant-date of CEO pay in S&P 500 companies in 2011 was $11.6 million, compared with an average realized pay of $12.3 million, where stock awards are the largest portion of both grant-date pay and realized-pay in 2011.

Additionally, Murphy distinguishes between using the average pay and the median pay. In the same context, he claims that both measures are legitimate measures of CEO pay but should be used for different purposes. Average pay should be used to assess aggregate levels of pay, while median pay should be used to describe compensation for a "typical" CEO. For the year 2011, he obtains a median of

$9.6 million for grant-date pay versus a median of $7.8 million for realized-pay. Median compensation is typically lower than the average pay, since a small number of very-highly paid CEOs will increase the average pay but not the median pay. This difference between grant-date and realized compensation, and averages and medians, according to Murphy, is especially pronounced in the stock option portion of executive pay. And since this form of compensation is increasing in importance, the author judges that it is primordial to account for these differences going forward in this field of study.

2.1.6 Financial Crisis and compensation

More recently, Vemela, Nguyen & Kommasani (2014) investigate the effects of a financial crisis on CEO compensation. Using a sample of 2,241 observations from Fortune 500 firms between the years 2004 and 2012 they find that a financial crisis has a small but significant impact on CEO compensation. Additionally, firm performance, firm size, and CEO duality (a CEO being both the CEO and chairman of the board) were found to have a significant effect on compensation on both pre-crisis and post-crisis periods. However, one difference found between the two periods was the composition of the pay. While cash based compensation decreased significantly post-crisis, equity compensation increased which suggests that the crisis affected the direct compensation of executives, which is the smaller portion of total compensation.

The authors used a pooled time-series cross sectional regression methodology to study the relationship of CEO compensation and firm performance before and after the financial crisis of 2008. They use three different models. The first two are to examine the effects of firm performance, board size, CEO duality, and firm size on CEO compensation pre- and post-crisis. The third model demonstrated the effect of financial crisis on CEO compensation in addition to the other variables examined in the previous models. Although the results were consistent with public criticism that executives are overpaid relative to the value they add to their respective companies, there remains some points to consider. The authors use the years 2004 to 2007 as the pre-crisis era and the years 2009-2012 for the post-crisis era. This procedure underlines that the financial crisis was a specific point in time and that the months leading to that period are comparable to growth periods such as in 2005-2006. Similarly, the few months after the

specific crisis date are presumably comparable to later periods such as in 2011-2012. Additionally, the sample period is very small, especially after the financial crisis. More data post-crisis would be needed to observe the medium to long term effects of the crisis. Most studies on this topic suffer from the lack of data after the financial crisis. This is an issue that can only be remedied with the passage of time and the documentation of additional data.

Gabaix, Landier and Sauvagnat (2013), attempt to examine the CEO incentives and the size of firms during and after the financial crisis. They build on Gabaix and Landier (2008)'s model that states that firm-size and CEO compensation are linearly related: the size of stakes view of executive compensation. They use 19,900 observations spanning from 1992 to 2011 retrieved from Compustat and ExecuComp. They focus on the period 2004-2011 since firm size successfully sharply dropped then rebounded during this period, offering them a strong basis to test their hypothesis. They find that changes in compensation did indeed closely track the movement in firm size as size and CEO compensation respectively dropped by 17.4% and 27.7% between the years 2007 and 2009. During the rebound in the 2009-2011 period, firm size and CEO compensation increased by 19% and 22%, respectively, confirming their hypothesis. These results are very much in line with Kaplan (2012), who documents that the firm size and executive compensation ratio has been constant since the early sixties. This relationship with size is a great indication of what to expect after the great recession, but is limited to quantifiable factors. Behavioral factors, such as the influence of the CEO and the perception of CEO talent are completely overlooked, even though they have been observed as having an important effect on executive compensation.

To conclude, the literature covering CEO compensation is extensive and continues to evolve with the times but the relationship between compensation after an economic shock and geography is still in its embryonic phase. The added value of this thesis lies in this relationship and in observing the effects of compensation of CEOs of rural firms as opposed to urban firms (proxy for firm size) following an economic shock.

2.2 Studies evaluating compensation vs. geographic variables

2.2.1 CEO compensation and geography

Many recent studies are integrating the component of geographical distance to measure its effects on their research topic. In their recent study, Kedia and Rajgopal (2005) analyze the effects of a firm's distance to the SEC and its effects on financial reporting. In the same context, Landier, Nair and Wulf (2006), study the effects of a firm's distance on divestiture and employee layoff, Loughran and Schultz (2007) study distance relationship to financial decisions, and Gao, Ng and Wang (2006) study the effect of firms' distance on divisional expansion. Despite this increase in popularity on the distance component, we have yet to observe the effects of geography on the subject of CEO compensation. Furthermore, it would be interesting to observe the latter before and after the financial crisis of 2008 to determine if social pressures (such as the "Occupy Wall Street" movement) had any effects on policies and policymakers of urban firms as opposed to rural firms and to observe how much power the CEO still holds over his board of directors after an economic shock.

2.2.2 Proximity and performance

It is recognized by now that despite large gains from global diversification, investors display a strong preference for local stocks (French and Poterba, 1991; Kang and Stultz, 1997). Recent studies show that this "home bias" phenomenon in global portfolio allocation exists even in domestic portfolio allocation, and that investment returns are higher in local holdings than those of non-local holdings. Coval and Moskowitz (1999) show that U.S. mutual fund managers demonstrate a strong preference for local stocks, and using data on individual investments, Zhu (2002) and Ivkovic and Weisbenner (2005) find that strong preference for local stocks also exist in individual investors. Almost all these studies conclude that such local bias is principally driven by information asymmetry between local and distant investors. For example, Coval and Moskowitz (1999), in a sample consisting of 1,189 investment managers running 2,183 different U.S. equity funds in the year 1995, demonstrate that the level of the local bias is greater for small, highly leveraged firms which produce non-traded

goods. Similarly, Ivkovic and Weisbenner (2005), with a large amount of data on individual investors made through a discount broker from 1991 to 1996, find that abnormal returns for local investments are higher for non-S&P 500 companies for which severe information asymmetry is present. Finally, Malloy (2005), using a large panel of analyst data from 1994 to 2001, shows that geographically proximate analysts issue more accurate earnings forecasts than other analysts and that this accuracy is stronger for companies located in rural areas. Collectively, these results suggest that geographically proximate investors possess an information advantage over their counterparts, and that this advantage translates into better performance possibly due to easier access to value-relevant information about the company.

2.2.3 Proximity and governance

From a governance perspective, monitoring of management involves considerable costs, which is likely to increase with the distance between the firm's headquarters and its analysts. These expenses are due to increased communication costs and increased travel distances to get the relevant information. For example, Sussman and Zeira (1995) present a model in which banks face monitoring costs that increase in distance. Also, Peterson and Rajan (2002) and Degryse and Ongena (2005) study the effects on loan conditions of geographical distance between firms and the lending banks and they demonstrate that transportation costs cause price discrimination for firms further away from their lender. Furthermore, Lerner (1995), in the context of U.S. venture capital, finds that the board membership of venture capital in biotechnology firms is partly determined by the distance between the firms and the venture capitalist. He argues that the presence of large monitoring costs associated with frequent visits to the portfolio firm and the required involvement in the firm's operations discourage distant VC's from participating in governance activities of their portfolio firm. Finally, Landier, Nair and Wulf (2006) show that company divisions that are closer to headquarters are less likely to face layoffs than remote divisions. This is explained by the bond that is created between managers and employees who frequently interact with one another and which makes it harder for managers to be detached. This suggests

that distance might create a possible disconnect between managerial incentives and shareholder interests.

As demonstrated, the firm's location is expected to affect its CEO's pay performance sensitivity due to different levels of information asymmetry. This thesis will add value to the existing literature as we will observe the pay performance sensitivity levels across firms located in various areas as well as in two different eras (pre-crisis and post-crisis). We will determine if the pay performance sensitivity as well as the compensation levels will be different for firms in rural areas as opposed to firms in urban areas.

2.3 Studies evaluating compensation vs. CEO power

2.3.1 CEO power over the Board of Directors and performance

In contrast to the optimal contracting theory, the theory of managerial power tends to prove that executive compensation is in fact not optimal. Indeed, if the level of CEO compensation is so high, it must not only be related to their skills and their ability to generate profits for the firm, but also, and above all, it must be their capacity to extract part of the shareholder wealth by influencing decisions that will benefit management instead of the shareholders: we then speak of managerial power and rent extraction. The amount of power that CEOs can have over their board of directors, the entity that represents the shareholders, can be a significant factor in determining the executive's compensation (Bebchuk and Fried, 2003). As mentioned earlier, executives will tend to make decisions which will benefit themselves, by focusing on short-term results and by engaging the company in ventures that do not necessarily add value to the shareholder. A popular way to solve this agency problem is to align the executive's compensation to the firm's performance (i.e. aligning the interests of shareholders with those of the CEO). It is usually up to a compensation committee, a standing committee under the supervision of the board of directors, to bear this responsibility. The problem arises when the CEO has a lot of influence on the board of directors. CEO power can then be used for personal rent seeking interests (Morse, Nanda and Seru, 2005).

2.3.2 Defining power

Before venturing any further, it is important to understand the definition of the "power" that the CEO's exerts over their boards of directors. There exists no agreed upon definition of power. Pfeffer (1981) refers to power as the "capability of one social actor to overcome resistance in achieving a desired objective or result". Similarly, Finkelstein (1992) defines power as "the capacity of individual actors to exert their will". According to Pfeffer (1997), "in order to demonstrate influence and control, most definitions of power include the idea of overcoming resistance". In addition, to distinguish power from luck, March (1966) argues that consistently overcoming resistance is an important determinant of power.

2.3.3 Earlier power studies

Although the above definitions of power might paint an image of the relationship of CEOs with their boards and how it might influence compensation, power might come from many formal and informal sources (Pfeffer, 1992). Earlier research has usually focused on a single or a few variables such as CEO stock ownership (Allen, 1981a; Geletkanycz et al., 2001), CEO duality (Finkelstein and D'Aveni, 1994), CEO tenure (Hill and Phan, 1991; Ryan and Wiggins, 2004) or CEO duality and insider ratio (Sridharan, 1996) to proxy for the relative power of CEOs over the board of directors. Studies applying a more refined measure of executive power include Combs and Skill (2003) who use founder status and CEO board tenure to develop a single measure of executive power. Grinstein and Hribar (2004) in turn, use three dichotomous variables (CEO duality, CEO on nominating committee and large boards) to develop a managerial power construct. Lambert et al. (1993) study the influence of power in 303 firms between 1982 and 1984 on the compensation of top managers. Beyond organizational level, they hypothesize power as equity ownership and selection of board members.

2.3.4 More recent studies on CEO power and incentive

In more recent studies, Elhagrasey et Al. (1999) explore how CEOs exert power over their board of directors and conclude that they do so through political tools and strategies in order to influence their own compensation. They examine four political strategies used to influence compensation decisions: cooptation (the process of absorbing new elements into an organization's decision making structure as a means of gaining their support or avoiding their opposition), the use of outside experts, the use of committees, and selective use of objective criteria. The author's basic assumptions are that (1) CEOs exercise power through these four political tactics to control the compensation process, resulting in the controversially high levels of compensation observed in American organizations; and (2) CEOs that exert more power, control the process more effectively which results in greater compensation packages. The authors empirically test the hypotheses using a sample of 203 large American manufacturing firms in 1985. They focus on the direct effects of CEO power, examining both formal power (whether the CEO is also the board chair) and informal power (CEOs tenure in office). Similar to this study, Conyon and Peck (1998) found that, for U.K. firms, CEO compensation was higher when the firm's board had a remuneration committee, which supports Elhagrasey et Al. (1999) theory that the committee is a political tool of the CEO rather than a limitation.

Adams, Almeida and Ferreira (2005) studied whether the CEO's power to influence decision-making is associated with future firm performance. With data on 336 firms from the period 1992 to 1999, they construct a power index consisting of five indicator variables: whether the CEO is also the chairman, whether the CEO also holds the title President, whether the firm has no President or Chief Operating Officer, if the CEO is the founder of the company, and the number of insiders on the board. The authors find a direct relationship between CEO power and higher compensation.

Morse, Nanda and Seru (2011), show that in the absence of contract disclosure, some powerful CEOs can use ex-post information to extract rents by making their incentives pay more sensitive to performance measures that they know are doing well, thereby rigging incentive pay. They use a panel of 1,119 firms in the U.S. over the period 1993 to 2003. For their measure of CEO influence over the board, they create an

index of CEO personal power and two measures of board weakness based on the proportion of insiders and the percentage of the board appointed by the CEO. The authors find that rigging accounts for ten percent of the compensation to performance sensitivity.

Given the concept that powerful CEOs receive higher compensation due to their status and influence, we will add value to the existing literature by observing if powerful CEOs maintain their power and thus their higher compensation even after a financial crash which puts their role and position in the spotlight. Inspired by the power index used by Adams, Almeida and Ferreira (2005), we will observe if CEOs are as powerful after the financial crisis of 2008. A second layer will be added to this analysis by observing the power index for firms in rural areas as opposed to firms in urban areas to distinguish between the locations of powerful CEOs.

3. HYPOTHESIS

The purpose of our study is twofold: we want to observe the effects of the 2008 financial crisis on CEO compensation to firm performance sensitivity and we want to observe whether the power that CEOs exert over their Board of Directors (which has a direct impact on the interests of shareholders) has varied and if this variation in power has influenced the compensation they receive.

Given that the main role of the CEO is to make decisions that maximize shareholder wealth, it is important to determine whether the remuneration of the CEO actually lends itself towards serving this interest.

Following the 2008 financial crisis, the Dodd–Frank Wall Street Reform and Consumer Protection Act was enacted. This act bestows a higher degree of power on shareholders and external compensation experts and encourages the idea of "say on pay", where shareholders can vote on the details of a compensation contract, in corporate America (Thomsen and Conyon, 2012). More specifically, shareholders get to vote, at least every three years, on the executive's compensation package. Also, once every six years, they can vote whether their required approval of executive compensation should be given more often than once every three years. Additionally, shareholders may disapprove any golden parachute compensation offered to executives.

However, the Equilar report of 2011 documented that more than 98% of the 2,252 Russell 3000 companies received a favorable vote for their current compensation policies in 2011. This suggests the majority of shareholders approve the CEO compensation practices and that executives will continue to receive higher pay levels. Moreover, the rebound in firm market capitalization after the financial crisis may give rise to augmented executive compensation as it has been shown that compensation is positively correlated with firm size. Based on this evidence, a higher pay for CEO could be expected post-crisis even when the firm performance has dropped.

H1: *Compensation levels as well as pay-performance sensitivity should be increasing after the financial crisis due to the rebound in market capitalization of firms and due to the added social pressures and new regulations that were instated.*

This research paper will allow us to observe if any changes in the pay-performance ratio have occurred as a result of the financial crisis of 2008. We take this popular topic a step further by introducing the geographical component and making observations of firms in urban areas against firms in rural areas, and by making observations on a time-series of data before and after the 2008 financial crisis. Doing so will allow us to observe if the events (such as the formation of groups like "Occupy Wall Street" and the enactment of the Dodd-Frank Wall Street Reform) following the 2008 financial crisis had a significant impact on the way executive compensation is measured after the crisis for firms in big cities as opposed to firms located further away in smaller rural areas. This will allow us to identify whether social pressures have only targeted and affected the firms operating in big financial centers as opposed to smaller rural locations.

The devastation that occurred following the financial crisis of 2008 not only made executive compensation a topic of consideration in economic reform discussions but also placed many CEOs under the scrutiny of the public eye and the topic of executive compensation resurfaced once again in the media. Much of the media coverage was fueled by the angry protests that took place under the "Occupy Wall Street" effort. The majority of this movement was focalized in booming financial hubs and largely ignored smaller/rural locations. This could be due to several reasons which include the size of the firm, the size of the network of contacts managed by a CEO, and the use of peer benchmarking to determine a CEO's compensation which all contribute to exorbitant levels of compensation

To begin with, firms in big financial centers tend to be bigger in size than firms that operate in smaller rural areas. Gabaix and Landier (2008) argue that the bulk of variations in CEO compensation across time and across companies can be explained as the result of competitive market forces that surround them. They show that in a market where the impact of CEO talent is scaled linearly by firm size, one should expect the compensation of CEOs to increase with the size of the firm. They assume that the

size of large firms, which are mainly located in big cities, has been increasing with time and that executive compensation has been increasing similarly.

Another factor that could explain this phenomenon is that CEOs which operate in big financial centers might have a bigger network of powerful contact giving them leverage with which to entice shareholders. Harvard law professor Larry Lessing expressed this very clearly when he claimed that "we live in a world where the architects of the financial crisis regularly dine at the White House"[3].

Additionally, an important distinction between firms in urban and rural firms is the peer benchmarking effect described by Hayes and Shaefer (2009). No firm wants to admit to having a CEO who is below average, so each firm wants its CEO's pay package to put him at or above the median pay levels of comparable firms. This type of peer benchmarking contributes to inflated pay levels in big cities.

H2: *Compensation of CEOs of urban firms should be higher than those of rural firms before and after the financial crisis.*

This paper will also focus on observing the evolution of the power that CEOs have over their board of directors before and after and economic disaster using the financial crisis of 2008 as the shock that separates these two eras. Some previous studies suggest that CEOs that have more power over their board of directors are more inclined to make decisions which ultimately benefit themselves and their personal compensation instead of the shareholders (Bebchuk and Fried, 2003). This element will also be analyzed with the consideration of geographic placement as CEO power will be examined in both urban and rural locations.

It is hypothesized that the majority of the variation in both CEO compensation and power will occur in urban areas as opposed to rural areas based on the notions of firm size and peer benchmarking and the relationship between money and power. Firms in urban centers are generally bigger in size than those located in smaller rural areas indicating that their market share and capital is also higher than those of rural firms. As a result, the compensation that is paid to executives is also higher. This idea is supported by the research performed by Gabaix and Landier (2008) on the relationship

[3] GLENN GREENWALD, THE GUARDIAN, JAN. 23, 2013

between CEO compensation and firm size. Additionally, the work performed on peer-benching marking by Hayes and Shaefer (2009) indicates that firms do not want to be thought of as being below average by having a CEO that is paid less than CEOs of other firms in the same geographical area. Given that past findings have shown that peer benchmarking leads to inflated salaries in big cities, it is reasonable to postulate that CEO compensation in urban areas is higher than those in rural areas.

H3: *Urban-firm CEO's traditionally have more power over their rural-firm CEO counterparts (thus are better remunerated), and should experience a reduction of their influence after the great recession.*

Finally, after the enactment of the Dodd-Frank act of 2010, which in theory should reduce the power that CEOs exert over their boards, we should be able to observe a reduction in the influence of CEOs after the financial crisis. This effect should be more pronounced on executives operating in urban firms since most of the attention was on them.

4. DATA

This section presents the data used: those on the remuneration of the CEOs and those related to the building of the "Power Index" required to observe the power of CEOs. We also explain how we built our database, combining data acquired from the ExecuComp database with our own variables resulting from manipulations. We also highlight the main variables we have retained in order to run the regression analysis.

The data on executive compensation comes from the ExecuComp database (Executive Compensation database) of Standard & Poor's. This database gathers data on executive compensation dating from 1992 up to the present for up to nine executives of all the U.S. public companies traded on an organized exchange. The source of the database is from companies' filings with the SEC. We retrieved data for the period 2000-2013 to capture enough years before and after 2008 financial crisis. We also restricted our analysis to only the CEOs for two reasons. First, CEOs are arguably the most important and influential decision makers in a firm. Second, since compensation is reported for the five highest paid executives, the identity of those individuals will vary from year to year, and limiting our study to only CEOs mitigate this problem. We identified 1,555 different firms and 10,624 observations (CEO-firm-years). We had to abandon a number of observations, because certain information necessary for our analysis were missing (total remuneration, salary, bonuses, zip code, title, etc).

4.1 Compensation data

We used several measures of CEO compensation for our analysis which include the following:

- Total current compensation (TCC) which is the sum of salary and bonus.
- Total Compensation Including Option Grants (TDC1) which is the total compensation for the individual year, compromised of the following: salary, bonus, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), and long-term incentive payouts.
- Total Compensation Including Options Exercised (TDC2) which is the total compensation for the individual year compromised of the following: salary,

bonus, total value of restricted stock granted, net value of stock options exercised, and long-term incentive payouts.

All three of these compensation types measures the direct payment a CEO receives from his firm within one fiscal year. However, these measures do not account for indirect compensation that the CEO derives from the revaluations of stocks and stock options already granted to him in previous years.

4.2 Other relevant variables

To classify firms as urban or rural, we follow a number of authors, including Coval and Moskowitz (1999), and use a company's headquarters as a proxy for its location. We generate the latitude and longitude coordinates of each firm in our database from the firm address and zip code acquired from ExecuComp. Following the definition in Loughran and Schultz (2006), a company is defined as an urban firm if its headquarters is in one of the ten largest metropolitan areas of the United States according to the 2000 census. These include New York, Los Angeles, Chicago, Washington-Baltimore, San Francisco, Philadelphia, Boston, Detroit, Dallas, and Houston. A company is defined as a rural firm if its headquarters is 150 miles or more from the center of any of the U.S. metropolitan areas of with a population of one million or more people according to the 2000 census.

Using the latitude and longitude data of each of our firms, and the latitude and longitude of the financial center of the ten major U.S. cities, we compute the distance between each firm and every city center. Firms in urban areas will have a distance of less than 150 miles from any one of the ten major city centers. Firms in rural areas, on the other hand, will be located more than 150 miles away from each of these ten cities. To distinguish between urban firms and rural firms, a dummy variable is created which takes the value of 1 (Urban) if distance calculated between a firm and a city center is less than 150 miles, and takes the value of 0 (Rural) if otherwise.

As mentioned above, we identified 1,555 different firms and 10,624 observations (CEO-firm-years). Of those, there are 4,885 observations that are CEOs who operate in rural areas, and 5,739 who operate in big urban centers. As for the period, we identified

the pre-crisis period as from 2000 to 2007, and the post-crisis era as being from 2010 to 2013. The reason we omit the years 2008 and 2009 in our calculations is to avoid data with very poor company performance and extremely high compensation levels which would create a bias in our results. The purpose of our study is to observe if any change in behavior occurred after the crisis and not to establish the strength of this relationship. We end up with 2,051 observations for the pre-crisis era, and 3,280 for the post-crisis era.

4.3 CEO power index

Following the concepts of Adams, Almeida and Ferreira (2004), and Morse, Nanda and Seru (2005), we construct an index of personal CEO influence over board decisions. The power index is created from ExecuComp data by giving the CEO one point for each of the following: being the chairman of the board; being the chairman of the board and also being the president of the company; having a tenure longer than the average tenure of 5.5 years; having past experience within the firm, before being appointed to CEO, of longer than the average of 9.3 years; and being promoted from within the firm as opposed from outside the company. The CEO's duality of chief executive and chairman implies the he will be present for and will direct every board initiative. When he is also the president of the company, the CEO has not yet offered the board an in-training successor into which they might use in case of disagreement (Morse, Nanda and Seru, 2005) which adds to his entrenchment. High CEO tenure proxies for entrenchment power (Bebchuck and Freid, 2004). Past experience in the company signals the extent of which a successor of the CEO is groomed within the company and involved in decision making prior to becoming CEO (Almeida and Ferreira, 2004). Longer past experience would lead to greater knowledge of the organization and company routines, greater experience in internal decision-making, along with stronger social ties with company insiders. Finally, being appointed from outside the firm puts new CEOs in a position with greater uncertainty regarding their relationship with new boards and insiders, which could lead to less power in comparison to CEOs who are appointed internally. To simplify matters, I assumed that if a CEO has

more than one year experience with the firm prior to becoming CEO, then he was hired internally.

To illustrate the procedure of building the power index, let's take Mr. John Hess, the CEO of Hess Corporation, as an example. To determine how much power Mr. Hess has over his board of directors, we evaluate the five precedent criteria for each year that he holds the title of CEO. First, he gets one point for criteria number one, since he is the "Chairman and Chief Executive Officer" according to his titles retrieved from the ExecuComp database. He is not awarded the second point since he does not have the "president" title. For the third criteria, his tenure, we give him a point since he had tenure of 18 years as opposed to the median tenure of all the CEOs of only five years. He does not get the point for the fourth criteria since he did not have experience within the firm prior to becoming CEO. Finally, we also do not give him a point for the 5th criteria since he was hired externally. This method is applied to every CEO-year observation and a maximum total score of five is allotted to the CEO who exerts the most influence over the board of directors, and the minimum score of zero, for those CEOs who do not have any influence over their boards. This score will be compared for the period before and after the financial crisis to observe if CEOs maintain a strong grip on their board. Similarly, we will do the same exercise for CEOs who operate in rural firms and CEOs who operate in urban firms.

4.4 Descriptive statistics

Table 1 presents summary statistics of CEO-firm characteristics segmented in our four segments of interests: pre-crisis and post-crisis, rural firms and urban firms.

Examining 2,487 rural firms and 2,844 urban firms both pre- and post-crisis, we note that rural firm CEOs exhibit a lower level of compensation (salary, bonus and TDC1) than those of urban firm CEOs. This observation is present both before and after the financial crisis of 2008. Specifically, rural firm CEOs receive on average $ 1.2 million in salary and bonus before the crisis, as compared to $1.45 million for urban firm CEOs. After the crisis, we see these numbers reduced to $0.95 million for rural firm CEOs and $1.1 million for urban firm CEOs. As for the total compensation received (TDC1), rural

firm CEOs gained on average $3.4 million before the financial crisis, 38% lower than urban firm CEOs who recorded on average $4.66 million. After the financial crisis, rural firm CEO compensation remained lower than their counterpart at $5.25 million versus $6.54 million.

Mean CEO compensation measures and firm/CEO characteristics, by location

Variables	Pre-Crisis		Post-Crisis	
	Rural	Urban	Rural	Urban
Market Value of Firm ($M)	$ 7,705	$ 10,521	$ 8,208	$ 11,721
# of Employees	24,032.54	21,515.88	22,408.84	19,941.32
Tenure (years)	3.58	4.48	6.57	6.99
Past Experience in Firm (years)	4.91	5.33	3.19	3.11
Average Salary (thousands)	$ 577.04	$ 625.45	$ 807.87	$ 861.82
Average Bonus (thousands)	$ 626.05	$ 821.84	$ 150.72	$ 259.59
Average TDC1 (thousands)	$ 3,380.96	$ 4,662.59	$ 5,252.24	$ 6,538.68
Number of Observations	991	1060	1496	1784

Note: A company is located in an urban area (Urban) if its headquarters is in the metropolitan area of New York City, Los Angeles, Chicago, Washington, San Francisco, Philadelphia, Boston, Detroit, Dallas, or Houston, and their suburbs. Rural companies are those located at least 150 miles away from the center of these metropolitan areas. Total direct compensation (TDC1) is the sum of salary, bonus, other annual short-term compensation, payouts from log-term incentive plans, the Black-Scholes (1973) value of stock options granted, the value of restricted stocks granted, and all other long-term compensation.

Additionally, we see that the average market capitalization for both urban and rural firms has edged higher after the financial crisis, which is in line with Gabaix and Landier (2012)'s results outlining the positive relation between size and compensation.

Tables 2.A and 2.B summarizes the components used in building the power index. Using the same set of data, we notice that urban firm CEOs are more influential in both periods. Of the five components, only one indicator (CEO was hired from within the firm) is in favor of the rural firm CEOs with 51% of CEOs in rural firm against 49% of their urban firm CEOs counterparts. Below are the statistics for the years 2000-2013.

Table 2.A – Number of observations of Power Index components

Number of observations of Power Index components

	Pre-Crisis		Post-Crisis	
Variables	Rural	Urban	Rural	Urban
CEO is chairman of the board	927	953	896	1038
CEO is Chairman and the President	489	489	496	578
CEO has above median tenure	290	402	720	861
CEO has above median experience	304	356	222	263
CEO was promoted within the firm	1250	1205	1440	1609

Table 2.B – Percentage of CEO Power Index components before and after crisis

Percentage of CEO Power Index components Before and After Crisis

	Pre-Crisis		Post-Crisis	
Variables	Rural	Urban	Rural	Urban
CEO is chairman of the board	49.3%	50.7%	46.3%	53.7%
CEO is Chairman and the President	50.0%	50.0%	46.2%	53.8%
CEO has above median tenure	41.9%	58.1%	45.5%	54.5%
CEO has above median experience	46.1%	53.9%	45.8%	54.2%
CEO was promoted within the firm	50.9%	49.1%	47.2%	52.8%
Number of Observations	991	1060	1496	1784

Note: The percentage figure represents the number of CEO's in the respective category (i.e. pre-crisis/ urban) over the total number of CEOs in that same category which qualifies for the component of the power index.

Finally, Table 3 compares the compensation of powerful CEOs with those of less powerful CEOs in our four categories of interest. We can clearly see that the CEO that is more powerful receives more compensation whether operating in a rural or urban area, or whether it was before or after the financial crisis. More specifically, rural firm powerful CEOs gained (salary + bonus) on average 16% more that less powerful CEOs before the financial crisis. After the crisis, we see this number climbing to 25%. Similarly, urban firm powerful CEOs were compensated on average 38% more than less powerful CEOs, however, we see this figure retracting to only 12% after the crisis. This suggests that the financial crisis and the reforms had a deeper impact on urban firm CEOs as hypothesized.

When looking at the total compensation (TDC1), the numbers describe a similar story. In rural areas, more powerful CEOs gained on average 26% more than less powerful CEOs before the crisis, and that number climbed slightly to 29% post-crisis. As for urban firm CEOs, the more influential CEOs were compensated on average 21% more than less powerful CEOs pre-crisis and that number dropped significantly to only 9% post-crisis.

Table 3 – Average compensation of influential CEOs per period and per area ('000 USD)

Compensation of Influencial CEOs per Period and Area

		Pre-Crisis		Post-Crisis	
	Variables	Rural	Urban	Rural	Urban
Salary + Bonus	Powerful CEOs	$ 1,294	$ 1,706	$ 1,073	$ 1,191
	Less Powerful CEOs	$ 1,112	$ 1,235	$ 856	$ 1,066
TDC1	Powerful CEOs	$ 3,769	$ 5,153	$ 5,964	$ 6,865
	Less Powerful CEOs	$ 2,990	$ 4,260	$ 4,616	$ 6,281

Note: The numbers represent an average compensation per period and per location. To distinguish between powerful CEOs and less powerful ones, we had put a cut-off point at the median of the POB scores which is 2.33. Those above 2.33 are considered powerful and those below are less powerful.

5. METHODOLOGY AND RESULTS

To enable us to observe the pay-performance sensitivity and the influence of CEOs before and after the financial crisis, and to compare these same factors between rural firm and urban firm CEOs, two methods will be used. The pay-performance sensitivity will be obtained using Jensen and Murphy's (1990) method, while the difference-in-differences method will be used to observe the evolution of both variables of interest after the catalytic event known as the 2008 financial crisis which caused the adoption of new regulations and reforms.

5.1 An update of Jensen and Murphy's work

The methodology and the framework of my paper are inspired by Jensen and Murphy's work on executive compensation. Although the purpose of this paper differs from theirs, this section is dedicated to emulating their methodology while using my own dataset to examine the correlation between executive compensation and firm performance for the years 2000 to 2013. This work is valuable since it tests Jensen and Murphy's method for a different time period and with a different dataset.

For simplicity, I will focus on only one component of executive compensation from their study- salary and bonus (TCC) - and will try determine how it is correlated with shareholder wealth. I will do so for four different segments: For CEOs in "rural" firms and for CEOs in "urban" firms in the pre-crisis and post-crisis periods. My work consists of finding the β_1 coefficient in Jensen and Murphy's first regression equation, reproduced bellow:

$$\Delta(TCC)_t = \alpha + \beta_1 \Delta(\textit{shareholder wealth})_t$$

I obtained salary, bonus and shareholder wealth data from Standard & Poor's ExecuComp database, which is more comprehensive than the Forbes surveys which has been used by the authors. Even though my sample of 10,624 observations will not consist of the same companies or executives than Jensen and Murphy's study, the purpose of this section is to observe a relationship between compensation and

shareholder wealth using their methodology. Following Jensen and Murphy's example, companies that did not have at least ten years of pay data, and thus at least nine years of pay change data, were excluded, as were companies with missing information, or whose history could not be tracked.

Once I had selected the companies for my study, I prepared their data regression in several ways. First, I computed the dependent variable: the change in salary plus bonus. To do this, I took the difference of the sums of a CEO's salary and bonus in consecutive years. For example, if salary and bonus data was available for 2000, 2001, and 2002, I calculated the change for 2001 by subtracting the total pay in 2000 from the total pay in 2001; and a change for 2002 by subtracting the total pay in 2001 from the total pay in 2002. The change in salary and bonus was computed separately for each CEO within each firm. If one CEO left the company to be replaced by another in the following year, I did not calculate the difference in total pay between those two years. The dataset is organized as panel data and calculations where carefully done within each firm and for each CEO.

I calculated the independent variable, the change in shareholder wealth, in several steps. Like Jensen and Murphy's, I defined shareholder wealth as rtVt-1, where rt is the inflation-adjusted rate of return, including dividends, on the company's common stock in fiscal year t and Vt-1 is the company's market value at the end of the previous year (t-1). Both of these variables are available for all the companies in ExecuComp which makes the task at hand that much easier. To get the shareholder wealth in 2003, for example, I multiply V2002 by r2003 – the return on the company's common stock, including dividends, in fiscal year 2003.

The regression equation required two years of shareholder wealth-change data, and thus three years of observations, for each year of pay-change data. Because of this constraint and because my dataset covered the years 2000-2013, the first year for which an equation could be written was 2002. An equation could not be written for 2001, for example, because it required the change in shareholder wealth in 2001 and 2000, which would have required information for 1999-2001.

5.1.1 Results

The pay-performance sensitivity (PPS) for the entire period was of $0.09 per $1000 of shareholder wealth, which is slightly higher than the $0.067 value found by Jensen and Murphy. When segmenting our dataset into more periods, we find a pay-performance sensitivity of $0.10 for the period before the financial crisis in comparison to $0.00 after the 2008 crisis. When segmenting further to include the geographical aspect, we find a sensitivity of $0.05 for "rural" firms before the crisis compared to $0.02 after the crisis. The "urban" firms on the other hand, had $0.11 before the crisis compared to a sensitivity of -$0.004 after the crisis suggesting that CEOs in "urban" firms started to lose money in order for shareholders to gain money. However, unlike Jensen and Murphy's study, all the pay-performance sensitivities found were not statistically significant at ninety-nine percent or even at ninety-five percent confidence levels, according to the t-statistics as shown in Table 4 below.

Table 4 – Pay-performance sensitivity analysis

CEO Compensation for Urban vs. Rural Firms

	Pre-Crisis		Post-Crisis	
Variables	Rural	Urban	Rural	Urban
PPS*	0.05	0.11	0.02	-0.004
t-stat	0.19	0.75	0.26	0.03
Number of Observations	991	1060	1496	1784

*Pay Performance Sensitivity (for $1000 in shareholder wealth)

CEO Compensation Pre-Crisis and Post-Crisis

Variables	Pre-Crisis	Post-Crisis
PPS*	0.10	0.00
t-stat	0.76	0.1
Number of Observations	2051	3280

*Pay Performance Sensitivity (for $1000 in shareholder wealth)

CEO Compensation Entire Period

Variables	2000-2013
PPS*	0.09
t-stat	1.32
Number of Observations	9068

*Pay Performance Sensitivity (for $1000 in shareholder wealth)

Not all the differences between the CEO pay-performance sensitivity of urban and of rural firms after the financial crisis of 2008 can be explained as being the cause of the financial crash. We might pick up the effects of other factors that changed around the time of the treatment. Also, given that the *PPS* of these two groups already differs prior to the treatment (as can be seen Table 4), it is possible that a permanent difference exists between these two groups given their nature and their size. Using the difference-in-difference method therefore calculates the "normal" difference in the outcome variable between the two groups (the difference that would still exist if neither group experienced the treatment). This removes biases in second period (post-crisis) comparisons between the treatment ("urban" firms) and control group ("rural" firms) that could be the result from permanent differences between those groups, as well as biases from comparisons over time in the treatment group (urban firms) that could be the result of trends.

5.2 Difference-in-Difference Method

Differences-in-Differences (DD) estimation has become an increasingly popular way to estimate causal relationships. This econometric method consists of identifying a specific event or treatment (often the passage of a law, or a financial crisis in our case). One then compares the difference in the outcomes after and before the event for groups affected by the intervention (PPS of urban CEOs) to the same difference for unaffected groups (PPS of rural CEOs). In other words, one could use data on the treatment and control groups before the treatment to estimate the 'normal' difference between them and then compare this with the difference after the receipt of the treatment (differences before and after the financial crisis).

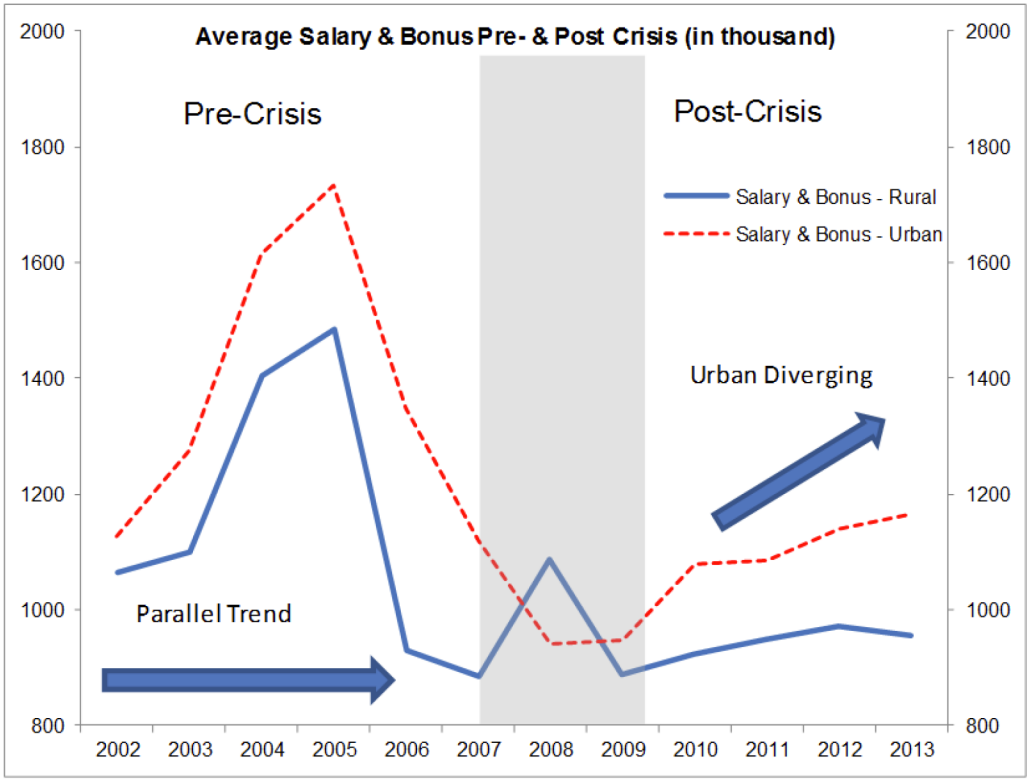
The great appeal of DD estimation comes from its simplicity as well as "its potential to avoid many of the endogeneity problems that typically arise when making comparisons between heterogeneous individuals" (Meyer 1995). It is also easy to add additional groups or periods to the regression set-up. We might, for example, add CEO in semi-urban firms or firm size as a third kind variable to our sample of CEOs. Furthermore, using the DD regression model facilitates empirical work with regressors

other than dummy variables. We can easily look at the difference in pay-performance sensitivities for all CEOs before and after the financial crisis disregarding the geographical aspect, or we might be simply interested in the sensitivity for the entire period.

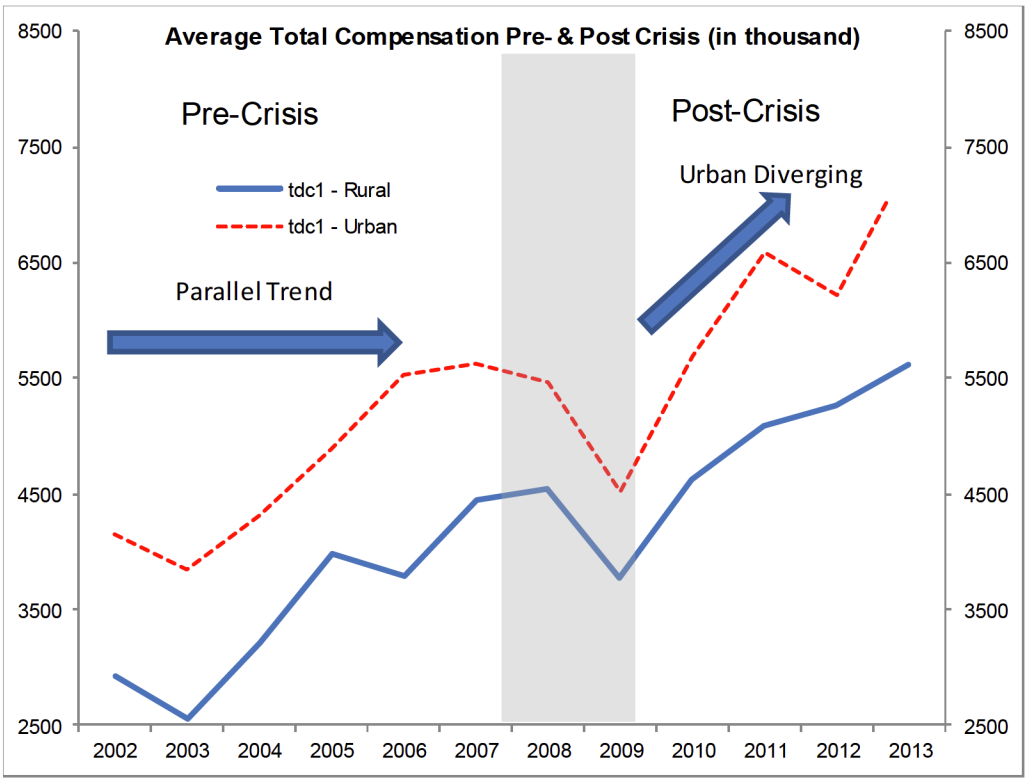
Obviously, DD estimation also has its limitations. DD estimation is only appropriate if the treatment is random. Also, DD typically use several years of serially-correlated data but ignores the resulting variation of standard errors (Bertrand, Duflo, and Mullainathan 2004). This leads to significant over-estimation of the t-statistic measure and significance level. Finally, when implementing the regression model, we assume that the control group (the CEOs in rural firms in our case) is unaffected after the event (the parallel trend assumption).

The Parallel trend assumption claims that the difference between the rural and the urban CEO variable should be the same before and after the treatment (financial crisis). When looking at the Graphs A and B below, we clearly see that is not the case with our study, demonstrating the shortcoming of the difference-in-difference method.

Graph A



Graph B



Note: The financial crisis (highlighted) acts as the treatment effect on both the Urban-firm CEO compensation and the Rural-firm CEO Compensation (salary + bonus and tdc1, respectively). In line with our hypothesis, both are rising post-crisis; with Urban-firm CEO compensation diverging from the trend.

5.2.1 Implementation

Observing a change in pay-performance sensitivity for urban CEOs only, before and after the treatment, would fail to control for omitted variables such as the size of the firm and macroeconomic conditions of the region. By including rural CEOs as a control in a difference-in-differences model, any bias caused by variables common to urban CEOs and rural CEOs are implicitly controlled for, even when these variables are unobserved. Assuming that urban CEOs and rural CEOs have parallel trends over time, rural CEOs change in pay-performance sensitivity can be interpreted as the change urban CEOs would have experienced, had the financial crisis not occurred, and vice versa.

Let *ppstreat,pre* and *ppstreat,post*, the empirical mean of PPS (pay-performance sensitivity obtained under the Jensen and Murphy method – refer to section 5.1.1) for subjects in the treatment group before and after the experiment. Similarly, *ppscontrol,pre* and *ppscontrol,post* are the average for the subjects of the control group pre- and post-crisis. The DD estimator corresponds to the average change in pay-performance sensitivity for subjects assigned to the treatment group minus the mean change in "pps" for the subjects in the control group:

$$\beta_{DD} = (pps_{treat,post} - pps_{treat,pre}) - (pps_{control,post} - pps_{control,pre})$$

If the treatment is randomly assigned, β_{DD} is therefore an unbiased estimator, consisting with the causal effect. Table 5 summarizes the results obtained using the Jensen and Murphy method:

Table 5 – Results obtained under the Jensen and Murphy method

	Pre-Crisis	**Post-Crisis**	Difference
CEOs in Urban Firms	0.11	-0.004	-0.114
CEOs in Rural Firms	0.047	0.022	-0.025
Difference			-0.0894

The results in Table 5 suggest that the pay-performance sensitivity measure for both CEOs in urban and in rural firms have declined after the financial crisis of 2008. The PPS for urban and rural CEOs have declined by 0.1142 and 0.0248 respectively. The DD estimation for urban CEOs after the financial crisis of 2008 is -$0.0894 per $1000 of shareholder wealth. None of these results are statistically significant. This assumes, however, that the treatment and the control groups have no other differences apart from the treatment, a very strong assumption which limits the significance of the results.

5.2.2 Regression Adjusted Model

This DD estimator can be written in terms of a regression. Let Δy_i be the post-experimental value of *y* for the i^{th} individual minus the pre-experimental value. The estimator of the double differences is the OLS estimator of β_1 in the regression is:

$$\Delta y_i = \beta_0 + \beta_1 X_i + \varepsilon_i$$

where the $\Delta y_i = y_{i1} - y_{i0}$

It is important to note that this is simply the differences estimator applied to differenced data. To implement the DD estimator in the form of an OLS regression requires data on the same individuals observed in two periods. But it may be the case that the individuals observed in the two periods are different so that in the pre-period those who are in the treatment group are observed prior to the treatment but we do not observe their outcome after the treatment in the post-period.

If we use *t=0* to denote the pre-period and *t=1* to denote the post-period, y_{it} to denote the outcome for individual *i* in period *t* then an alternative regression-based estimator that just uses the level of the outcome variable is to estimate the model :

$$y_{it} = \beta_0 + \beta_1 X_i + \beta_2 T_t + \beta_3 X_i * T_t + \varepsilon_{it}$$

where X_i is a dummy variable taking the value 1 if the individual is in the treatment group and 0 if they are in the control group, and T_t is a dummy variable taking the value 1 if in the post-treatment period and 0 in the pre-treatment period. The difference-in-difference estimator is going to be the OLS estimate of β_3, the coefficient on the interaction between X_i and T_t. Note that this is a dummy variable that takes the value 1 only for the treatment group in the post-treatment period.

5.2.3 Setting up for DD regression

The purpose of our study is to observe the pay-performance sensitivity of CEOs of urban and rural firms before and after the financial crisis in order to determine if the new reforms or the added social pressure affected them. I also believe that the power that the CEOs exert over their board of directors is an important contributing factor in

deciding the CEO's pay, I want to observe if this power is consistent even after the crisis. Therefore, the DD regression has been done for three different dependent variables: *lsal*, *ltdc1*, and *POB*. The first variable is the log of the base salary. The second is the log of tdc1 (equal to the total compensation including option grants which is the total compensation for the individual year, compromised of salary, bonus, total value of restricted stock granted, total value of stock options granted). The third variable is the power over the board score that each CEO scored as described in section 4.4. The independent variables will consist of the dummy variables *U*, which designates if the CEO is from an urban firm, *Post*, which indicates if the observation is after the financial crisis, and U*P, the interaction of the urban variable with the Post variable. The regression equations are as shown below:

$$LTDC1_{it} = \alpha + \beta_1 U_i + \beta_2 Post_t + \beta_3 (U_i * Post_t) + \varepsilon_{it}$$

$$LSAL_{it} = \alpha + \beta_1 U_i + \beta_2 Post_t + \beta_3 (U_i * Post_t) + \varepsilon_{it}$$

$$POB_{it} = \alpha + \beta_1 U_i + \beta_2 Post_t + \beta_3 (U_i * Post_t) + \varepsilon_{it}$$

where ε_{it} is a white noise additive term. As discussed above, the β_3 tells the change in the pay levels of CEOs in urban firms post-crisis in absolute terms. Convergence (divergence) is indicated by a negative (positive) parameter estimate, such that the pay of CEOs in urban firms will converge downwards (upwards) after the great depression of 2008. Similarly for the POB index, a negative parameter estimate will indicate that CEO exerts less power after the financial crisis and the implementation of the Dodd-Frank act.

5.2.4 Results & Analysis

In these equations, the key identifying assumptions is that the only difference pre- and post-crisis between urban and rural CEOs is the effects of the financial crisis. This is equivalent to saying that the coefficient β_3 would be zero if the financial crisis had

not occurred. The results of the DD regression are presented in the following Table 6 below:

Table 6 – Results of DD Regression

β_3	Coef.	Std.Err.	t	P>|t|	Adj R-Square
LTDC1	-0.04	0.025	-1.59	0.11	0.74
lSAL	-0.03	0.026	-1.13	0.26	0.60
POB	-0.04	0.115	-3.35	0.00	0.95

Total Compensation Including Option Grants (TDC1), post-crisis has declined by 4% for CEOs operating in urban environments. Although this result is not statistically significant, it is in line with our hypothesis and expectations that the added pressure and added regulations put a downward pressure on executive compensation in major metropolitan areas. The coefficient β_3 converges after the event of the financial crisis as expected. This decrease can be attributed to decreasing bonuses, decreasing option awards, diminished restricted stock awards and LTIP pay-outs, and decreasing other compensation. Even the base salary has decreased by 3% post-crisis as indicated by the beta coefficient of LSAL, the log of the base salary of CEOs.

As for the power that the CEO exerts over their board of directors, the coefficient POB is -0.038 which indicates that CEOs exert less power over their boards after the events of 2008 and the implementation of the Dodd-Frank act. The POB score is four percent lower than the pre-crisis era and the result are statistically significant at a 99% confidence level. These results are in line with our hypothesis and logical given that following the 2008 financial crisis, the power that CEOs exert over their board became a topic of political discussion and economic reform. The Dodd-Frank Act allowed shareholders to take back some power that company management had taken to extract rent. These results, as mentioned in section 5.1.1, may not all be caused by the financial crisis and the passage of the Dodd-Frank Act. One could consider a different approach of analysis, which perhaps, might indicate different results. One might use a

different measure of executive power for example, or even use an alternative method from the difference-in-difference methodology.

5.3 Robustness test

We have already shown that using another methodology (the Jensen and Murphy method) resulted in statistically insignificant results in the previous section. Therefore, we have decided to test additional compensation measures in hopes to get statistically significant results. In this section, we will test two alternative compensation measures that we have already described in the section 4 which discusses the data used: LTCC and LTDC2. LTCC consists of the log of the base salary plus bonus for each CEO per fiscal year. LTDC2 consists of the log of the total compensation including options exercised. This is the total compensation for the individual year compromised of the following: salary, bonus, total value of restricted stock granted, net value of stock options exercised, long-term incentive payouts, and all other total compensation as described by Compustat. We applied the same regression while changing the dependent variable:

$$LTCC_{it} = \alpha + \beta_1 U_i + \beta_2 Post_t + \beta_3 (U_i * Post_t) + \varepsilon_{it}$$

$$LTDC2_{it} = \alpha + \beta_1 U_i + \beta_2 Post_t + \beta_3 (U_i * Post_t) + \varepsilon_{it}$$

The results are presented in Table 7 below:

Table 7 – Results of Robustness test

β_3	Coef.	Std.Err.	t	P>|t|	Adj R-Square
LTCC	-0.03	0.027	-1.15	0.25	0.58
LTDC2	0.01	0.331	0.25	0.8	0.65

Once again, we generate statistically insignificant results. The coefficient β_3 of LTCC, the log of the summation of base salary and bonus, again declines by 3%, while LTDC2 rises almost one percentage point indicating a divergent trend line after the financial crisis. This difference with the LTDC1 measure obtained in the previous section is most probably due to the net value of options exercised component of LTDC2. It means that CEOs generated additional income post-crisis by exercising more stock options than before the financial crisis.

6. CONCLUSION

The main idea of this thesis is to observe the effects of a financial crisis on executive compensation and on the power that CEOs exert over their board of directors. Essentially, we want to observe if social pressures (the Occupy Wall Street movement) and new regulations (the Dodd-Frank act) had any effects on the way executives are compensated. With 10,624 observations of CEO-firm-years spanning from 2000 until 2013, we attempt to observe two variables (CEO compensation and CEO power over their boards of directors) for four different segments: (1) pre-crisis and urban firms, (2) pre-crisis and rural firms, (3) post-crisis and urban firms, and (4) post-crisis and rural firms.

Despite the results achieved in this study not being statistically significant, they still indicate that the correlation between executive compensation and shareholder wealth has improved in the first decade of the millennium when compared to Jensen and Murphy's results from the early 80's. Using the Jensen and Murphy pay-performance sensitivity method, we can see that the salary and bonus sensitivity decreases after the financial crisis which is counter-intuitive. Furthermore, firms located in rural areas seem to have compensation packages that are more in line with shareholder interests, which supports Murphy's (1998) claim that smaller firms are more pay-performance sensitive than larger firms.

We arrive at the same conclusions when using the difference-in-difference method. After the financial crisis, firms operating in urban areas see their CEO compensation decrease on average by 4%, while direct compensation (salary and bonus) decreases by 3%. To observe the power that CEOs exert over their board of directors, we constructed a "power index" inspired by the work of Adams, Almeida and Ferreira (2004). Using the difference-in-difference regression model, we obtain a reduction of 4% in power post-crisis for CEO's in urban environment. These results are statistically significant at the 99% level and are in line with our hypothesis and the objective of the Dodd-Frank act of 2010.

Some limiting aspects of this thesis are that we do not have enough data after the financial crisis to observe its consequences over governance and CEO pay. Also, the difference-in-differences methodology uses assumptions that are limiting, such as

the parallel trend assumption. Additionally, because of serial correlation, the DD standard errors may very well be understated, resulting in overestimated t-statistics and significance levels. Furthermore, when building the "power index" to evaluate the power that CEOs exert over their boards of directors, a total of five deterministic components might be too small of a number to properly capture the CEO's real influence.

A more exhaustive list of governance components could prove to be a better indicator of powerful CEOs. Further studies conducted when more data is available (post 2015) would prove useful to further analyze the mid-to-long term effects of the social pressures and the new regulations implemented in 2010 on governance and compensation. Additionally, it would be interesting to segment the research even further and compare the governance and compensation scheme of companies in different industries after the financial crisis. Although the subject of compensation and governance has been extensively researched in the past, the topic of compensation and governance after an economic shock and firm emplacement remains in its infancy.

7. REFERENCES

Adams, Renée B., Heitor Almeida, and Daniel Ferreira. "Powerful CEOs and their impact on corporate performance." *Review of Financial Studies* 18.4 (2005): 1403-1432.

Bebchuk, Lucian Arye, and Jesse M. Fried. *Executive compensation as an agency problem*. No. w9813. National Bureau of Economic Research, 2003.

Bebchuk, Lucian A., and Jesse M. Fried. "Pay without performance: Overview of the issues." *Journal of Applied Corporate Finance* 17.4 (2005): 8-23.

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. "How much should we trust the DD method" (2004).

Ciscel, David H., and Thomas M. Carroll. "The determinants of executive salaries: An econometric survey." *The Review of Economics and Statistics*(1980): 7-13.

Choe, Hyuk, Bong-Chan Kho, and René M. Stulz. "Do domestic investors have an edge? The trading experience of foreign investors in Korea." *Review of Financial Studies* 18.3 (2005): 795-829.

Coval, Joshua D., and Tobias J. Moskowitz. "Home bias at home: Local equity preference in domestic portfolios." *The Journal of Finance* 54.6 (1999): 2045-2073.

Conyon, Martin J., and Simon I. Peck. "Board control, remuneration committees, and top management compensation." *Academy of Management Journal* 41.2 (1998): 146-157.

Degryse, Hans, and Steven Ongena. "Distance, lending relationships, and competition." *The Journal of Finance* 60.1 (2005): 231-266.

Edmans, Alex, Xavier Gabaix, and Augustin Landier. "A multiplicative model of optimal CEO incentives in market equilibrium." *Review of Financial Studies*22.12 (2009): 4881-4917.

Elhagrasey, Galal M., J. Richard Harrison, and Rogene A. Buchholz. "Power and pay: the politics of CEO compensation." *Journal of Management and Governance* 2.4 (1998): 311-334.

French, Kenneth R., and James M. Poterba. *Investor diversification and international equity markets*. No. w3609. National Bureau of Economic Research, 1991.

Finkelstein, Sydney, and Richard A. D'aveni. "CEO duality as a double-edged sword: How boards of directors balance entrenchment avoidance and unity of command." *Academy of Management Journal* 37.5 (1994): 1079-1108.

Gao, Wenlian, Lilian Ng, and Qinghai Wang. "Does Corporate Headquarters Location Matter for Firm Capital Structure?." *Financial Management* 40.1 (2011): 113-138.

Gabaix, Xavier, Augustin Landier, and Julien Sauvagnat. "CEO pay and firm size: an update after the crisis." *The Economic Journal* 124.574 (2014): F40-F59.

Grinstein, Yaniv, and Paul Hribar. "CEO compensation and incentives: Evidence from M&A bonuses." *Journal of Financial Economics* 73.1 (2004): 119-143.

Haleblian, Jerayr, and Sydney Finkelstein. "Top management team size, CEO dominance, and firm performance: The moderating roles of environmental turbulence and discretion." *Academy of Management Journal* 36.4 (1993): 844-863.

Hall, Brian J., and Jeffrey B. Liebman. *Are CEOs really paid like bureaucrats?*. No. w6213. National bureau of economic research, 1997.

Hayes, Rachel M., and Scott Schaefer. "CEO pay and the Lake Wobegon effect." *Journal of Financial Economics* 94.2 (2009): 280-290.

Ivković, Zoran, and Scott Weisbenner. "Local does as local is: Information content of the geography of individual investors' common stock investments."*The Journal of Finance* 60.1 (2005): 267-306.

Jensen, Michael C., and Kevin J. Murphy. "Performance pay and top-management incentives." *Journal of political economy* (1990): 225-264.

Jensen, Michael C., and William H. Meckling. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure." *Journal of Financial Economics* 3.4 (1976): 305-60. Web.

Joe Ueng, C., Donald W. Wells, and Juliana D. Lilly. "CEO influences and executive compensation: large firms vs. small firms." *Managerial Finance* 26.8 (2000): 3-12.

Kaplan, Steven N. "It's the Market: The Broad-Based Rise in the Return to Top Talent." *The Journal of Economic Perspectives* 27.3 (2013): 35-55. *JSTOR*. Web. 21 Apr. 2015.

Kedia, Simi, and Shiva Rajgopal. "Neighborhood matters: The impact of location on broad based stock option plans." *Journal of Financial Economics*92.1 (2009): 109-127.

Landier, Augustin, Vinay B. Nair, and Julie Wulf. "Trade-offs in staying close: Corporate decision making and geographic dispersion." *Review of Financial Studies* 22.3 (2009): 1119-1148.

Loughran, Tim. "Geographic dissemination of information." *Journal of Corporate Finance* 13.5 (2007): 675-694.

Lewellen, Wilbur G., and Blaine Huntsman. "Managerial pay and corporate performance." *The American Economic Review* (1970): 710-720.

Lerner, Joshua. ""“Angel” financing and public policy: An overview." *Journal of Banking & Finance* 22.6 (1998): 773-783.

McGuire, Joseph W., John SY Chiu, and Alvar O. Elbing. "Executive incomes, sales and profits." *The American Economic Review* (1962): 753-761.

Murphy, Kevin J. "Executive compensation." *Handbook of labor economics* 3 (1999): 2485-2563.

Malloy, Christopher J. "The geography of equity analysis." *The Journal of Finance* 60.2 (2005): 719-755.

Morse, Adair, Vikram Nanda, and Amit Seru. "Are incentive contracts rigged by powerful CEOs?." *The Journal of Finance* 66.5 (2011): 1779-1821.

Morse, Adair, Vikram Nanda, and Amit Seru. "Are incentive contracts rigged by powerful CEOs?." *The Journal of Finance* 66.5 (2011): 1779-1821.

Meyer, Klaus E. "Direct Foreign Investment in Eastern Europe the Role of Labor Costs." *Comparative Economic Studies* 37.4 (1995): 69-88.

Petersen, Mitchell A., and Raghuram G. Rajan. "Does distance still matter? The information revolution in small business lending." *The Journal of Finance*57.6 (2002): 2533-2570.

Pfeffer, Jeffrey. *Power in organizations*. Vol. 33. Marshfield, MA: Pitman, 1981.
Roberts, Harry V. "Stock-Market “Patterns” And Financial Analysis:

Methodological Suggestions." *The Journal of Finance* 14.1 (1959): 1-10.
Sussman, Oren, and Joseph Zeira. "Banking and development." (1995).

Thomsen, Steen, and Martin Conyon. *Corporate governance: Mechanisms and systems*. McGraw Hill, 2012.

Walters, Bruce. "Top Executive Compensation: Equity or Excess? Implications for Regaining American Competitiveness." *Journal of Business Ethics* 14.3 (1995): 227-34. *JSTOR*. Web. 21 Apr. 2015.

Zhu, Ning. "The local bias of individual investors." (2002).