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EFFECTS OF EXECUTIVE LONG-TERM INCENTIVE COMPENSATION AND
OWNERSHIP STRUCTURE ON PERCEPTIONS OF RISK

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ABSTRACT

This study explores the relationship between a firm's ownership structure on CEO long-term incentive compensation and its role in a CEO's risk appetite through financial leverage. The study encompasses the S&P 500 companies during the years of 2010-2013 using a fixed effect panel regression for empirical analysis. Its purpose is to further expand the agency-based literature on executive risk taking in regards to the effects of block holders and implementation of a payout structure more skewed towards the long-term incentive plan.

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Chapter 1

Introduction

The long-term incentive compensation granted to a CEO is intended to lengthen the CEO's time horizon, focus their attention on creating shareholder value and align the interests of the CEO and shareholders of the company (Armour, Hansmann, and Kraakman, 2009; Bebchuck and Fried, 2003; Carpenter, Pollock and Leary, 2003; Garen, 1994; Westphal and Zajac, 1994). However, how this then effects the risk perceptions of the CEO has not been explored in much detail in past studies and is just gaining traction now. This paper seeks to address how this shift of compensation and other internal mechanisms alters firm risk taking through financial leverage. Furthermore, the ownership structure of the company is also explored, specifically in relation to block holders, because of their additional monitoring tendencies and perceived risk differential compared to other shareholders (Werner, Tosi and Gomez-Mejia, 2005).

Executive compensation is intended to motivate the CEO to not only provide the greatest value to the company and shareholders but to also make some of the most difficult decisions. However, there is a great disconnect between the executive's goal and the shareholders' goals and that is the root of the agency problem. In order to incentivize the manager, the goal of executive compensation is to link the company performance to the remuneration package. As it is difficult to assess exactly how the CEO contributed to a company's performance, there lies another issue. Reasons as to why it is difficult to assess

the executive's performance in relation to the company is because of environmental and economic factors, industry trends, past CEO decisions, and so forth (Barnett and Pollock, 2012). Behavioral theory leads us to believe that executives want the highest compensation package possible and will act accordingly to meet their desires, which may not be in the shareholders' interests. A solution to more strongly align the interests of the two stakeholders is through linking more of the executive's pay to the company performance through a long-term incentive plan (LTIP).

This LTIP is compensation in the form of stock options and thus this long-term view can shift an executive's mindset from trying to get the highest cash compensation for the year to thinking more strategically to the long-term view of the company. There have been numerous studies done evaluating compensation in relation to returns of the company both prior and following different reforms, but there is still much more to be explored (Bebchuck and Fried, 2003; Carpenter, Pollock and Leary, 2003; Garen, 1994; Westphal and Zajac, 1994). As LTIP compensation is on the line and is valued through prices in the future, there is more risk at hand for the executive. This shifts a greater focus towards this type of pay as of lately and that will be further discussed in the next chapter.

Tasked with crucial decision-making that affects a company's overall strategy, a huge component of an executive's job is to consider the capital structure of the firm. The capital structure focuses on how to finance the firm by finding the optimal debt to equity ratio. This study focuses primarily on the amount of leverage a firm takes and the risk behind taking on that additional debt. The agency problem presents itself again because an executive and a

shareholder may have different views on how the company should optimally finance itself and through which asset investments.

The other component to this paradigm is in regards to ownership structure, since shareholders may have different opinions about the amount of leverage a firm should take on, instead of one collective opinion. This is where the study also focuses on ownership structure, primarily block holders who have at least a 5% ownership in the company. While shareholders may have numerous opinions on company direction and varying amounts of interests, it can be argued that block holders ultimately all have the same objective. The reason being, block holders own a huge block of stock, which ultimately means they are not as able to move in and out of positions with ease (Carpenter, Pollock and Leary, 2003; Kanatas and Qi, 2001; Magnan, St-Onge and Thorne, 1995). They are simply not able to liquidate holdings if the company takes a turn in the wrong direction because if they were to merely sell out their position it would drive the stock prices down even further. The more block holders a company has, the more involved those block holders will be since they have more on the line. This is where the study explores dilution of ownership and its relationship with risk-taking.

The risk metric in this case here is the amount of leverage the firm takes on. In order to see a relationship with how much risk is undertaken, this study attempts to expose the risk appetite of executives and why the ownership structure can have an influence on risk as well. Behavioral economics suggest that risk is in the eye of the beholder and is perceived depending on a multitude of factors. The other risk metric used in this study is LTIP, since

this is the proportion of risk directly affecting the executive. Prospect theory plays a role here in many ways as well and will be further discussed.

Chapter 2 discusses these theories in depth while covering their relationship with risk. Chapter 3 provides the hypotheses while Chapter 4 discusses the empirical analysis in detail where findings support a strong negative relationship between block holders and total CEO compensation as well as LTIP. Furthermore, the analysis suggests a negative relationship between the proportion of LTIP to total compensation in relation to the debt to equity ratio while there was a positive relationship between total compensation and the debt to equity ratio. Lastly, Chapter 5 serves as a conclusion and addresses future research opportunities.

Chapter 2

Literature Review

Prospect Theory and Agency Theory

Agency theory provides a framework for interpreting the conflicting views of shareholders and management. This stems from the differing set of interests an executive might have from the shareholders of a company. While shareholders ultimately want to increase the value of the firm and the agent his or her own wealth, the journey towards that ambiguous point is often muddled as the decisions of the executive might not always represent the decisions yearned for by the shareholders. One common way to attempt to align the interests of the two is by linking compensation to firm performance. However, there are many external and internal factors that influence firm performance, therefore making compensation more difficult to assess as well.

There has been a great deal of research done in this area but what is just being explored further as of recent years is how risk is evaluated and interpreted between the two parties in relation to making these decisions that have an effect on firm valuation (Armour, Hansmann, and Kraakman, 2009; Bebchuck and Fried, 2003; Carpenter, Pollock and Leary, 2003; Datta, Iskandar-Datta and Raman, 2005; Garen, 1994; Wade and Pollock, 1997; Wiseman and Gomez-Mejia, 1998; Werner, Tosi and Gomez-Mejia, 2005; Westphal and

Zajac, 1994). In this section I explore the assumptions of agency theory and how it does not incorporate the many layers of behavior, specifically risk appetite, that affect executive and shareholder decision-making.

Prospect theory is a decision-making theory that behavioral economics has adopted in order to better understand how to align the interests of shareholders and executives. Shareholders are seen as risk neutral since they can potentially spread their risk among many different firms, but executives are considered more risk averse because they cannot diversify their wealth in the same way. Prospect theory suggests that risk is relative and viewed differently based on past experiences encountered by executives and shareholders (Carpenter, Pollock and Leary, 2003; Wiseman and Gomez-Mejia, 1998). It is a more descriptive way to evaluate risk in decision-making and differs greatly from agency theory. It recognizes that there are many moving parts and aligning the decisions sought by both executives and shareholders is a huge challenge because of how many factors are involved.

Prospect theory is useful for understanding why one CEO may undertake a more risky project over another less risky project. This theory promotes the idea of perception and ultimately how a CEO will go about making a choice by using a reference point (Carpenter, Pollock and Leary, 2003). When making a decision a CEO will act in a manner that minimizes losses and maximizes gains, but the reference point they use to assess gains and losses is subject to change in relation to performance outcomes. For example, if the company performs well following a certain decision, this reference point may increase and the bar is set higher. Consequently, if a firm does not perform well relative to this new standard it may be deemed a loss, even when comparing to the original reference point it is viewed as a

success (Mishina, Dykes, Block and Pollock, 2010). This perception is difficult to distinguish and even more difficult to measure.

Wiseman and Gomez-Mejia (1998) explore the issue that agency theory does not wholly address the risk differential between management and shareholders. They recognize the need to develop the risk concept within agency theory. They argue that agents are only seen as either risk averse or risk neutral when compensated accordingly but not viewed as risk seeking or risk loving. Furthermore, their review of the literature recognizes the continued growth in the agency theory literature and in the risk taking literature, but that they do not take the other literature into account. Their study bridges this gap and seeks to advance agency theory by accounting for how risk is perceived. Owners have greater incentive to take on additional risk if there are prospects of additional returns. “To the extent that the agents’ risk aversion exceeds the owners’ willingness to accept greater risks in order to maximize shareholder value, a potential agency problem exists (Carpenter, Pollock and Leary, 2003: 804).”

A further divergence between prospect theory and agency theory is that in the former the risk of a decision is based on how the executive frames the problem while in the latter the executive behavior is held consistent across firms, assuming all executives will act rationally. Prior performance also helps to differentiate between the two since with prospect theory the framing of the risk is based on past performance, while agency theory makes a blanket assumption of risk aversion, and that risks are assessed on an absolute basis. The reference point is mentioned again, “Using current wealth or executive aspirations as the reference points for framing problems as gain or loss, behavioral models predict that decision makers

exhibit risk-averse preferences when selecting among positively framed prospects and exhibit risk-seeking preferences when selecting among identical but negatively framed aspects (Wiseman and Gomez-Mejia, 1998: 134).”

Another interesting phenomenon evaluated in prospect theory is the magnitude of the outcome, either a loss or gain, where managers will direct more time and energy to protect losses than they will to increase their gains. This can explain why managers feel more pressure to continue to exceed expectations when their company performs well and take drastic measures. This can also explain the increased investor pressure. However, it inevitably becomes more difficult to meet continued higher expectations so resulting to riskier decisions to seek better performance may have an opposite effect (Mishina et al, 2010; Wiseman and Gomez-Mejia, 1998). As these reference points continue to change, losses that may not have been viewed as losses before can result in negative future perceptions of the firm and a further disconnect between shareholders and managers.

Hubris has an effect here, where CEOs may become not only extremely confident but feel as though they cannot lose if they have a past continued winning streak (Mishina et al, 2010). This can lead to even more excessive risk-taking. This can further be fueled with shareholders sharing certain feelings. They may be inclined to persuade managers to take on riskier decisions if they also have a feeling of infallibility. It also relates to the “house money effect,” where managers who have had success in the past no longer perceive themselves to be taking on all the risk as if it were with their own capital but instead to be using the company’s money. This further leads to excessive risk taking because of the notion of

separate capital (Mishina et al, 2010; Werner, Tosi and Gomez-Mejia, 2005; Westphal and Zajac, 1994).

Carpenter and colleagues refer to an executive's reflection on prior outcomes and how he or she will leverage those experiences in future risky decisions as reasoned-risk taking (2003). Experience can help limit potential losses because of performance improvement and selecting the option that has the highest probability of success.

Loss aversion plays a huge role in evaluating a decision in relation to a reference point because a loss averse executive might take on a riskier decision to avoid a loss instead of a less risky decision that is anticipated to decrease the loss. This behavior results from the fact that an executive is more sensitive to losing wealth more than he or she is to further increasing wealth. Risk aversion on the other hand is more deeply intertwined with agency theory and considers expected outcomes more in proportion with risk or the more optimal breakdown of value in relation to risk (Carpenter, Pollock and Leary, 2003; Wiseman and Gomez-Mejia, 1998).

As evident in this section, risk is multi-faceted. What is risky to one manager may not be perceived so by another. Depending on the CEO's experience, tenure and age among other factors can greatly vary his or her opinion on taking on the risky action. For example, in Carpenter's study conducted with his colleagues in 2003 focusing on high-technology companies, one particular risk focused on for companies is international expansion and the risks associated with that. However, there are also risks from not being an international player if competitors are already on the global scale. Pursuing international ventures can

have varying perceptions of risk depending on the CEOs international experience. While this is just one example of many, it demonstrates the notion that all risk is relative.

Long-Term Incentive Payout

After further exploring the missing gap of prospect theory in agency theory and realizing that by evaluating the prospect theory further there can be benefits or steps towards better aligning shareholders and executives interests. While an executive's compensation is currently one of the greatest incentives to align the two stakeholders, I want to focus specifically on long-term incentive compensation. This structure attempts to treat the principal-agent problem by awarding management through stock ownership rather than other compensation such as cash bonuses or stock options (Kanas and Qi, 2001). This can be deemed a more viable option because it directly strengthens the tie between executives and shareholders. This can help align both the interests of the principals and agents since the agents then have a direct stake in the welfare and value of the company. This option can also assist in retaining CEOs over the long run (Wade, Porac and Pollock 1997; Westphal and Zajac, 1994).

Executive compensation typically has three components: a base salary, an annual bonus and the long-term incentive payout. These three components stem from different factors. The base salary is relative to other companies in that industry, CEO experience and tenure and other salary stakes set by the company. The bonus is more of a reward that can vary year-to-year as it is more contingent on company performance and market conditions

that year. Lastly, the LTIP is the value of the amount of options and exercises awarded. As mentioned previously, the more remuneration given in LTIP terms, the more aligned the CEO will become with other shareholders. Since there have been many studies completed to evaluate the relationship between CEO pay and company performance, the focus of this study is the risk tied to this pay.

Measuring the quality of an executive is extremely difficult for three reasons as compiled in the Oxford Handbook of Corporate Reputation. These reasons include a company's exposure to outside factors such as industry and environmental trends, the team decisions behind a company's performance, and other strains the executives face. Executives are often times limited to certain decisions and the company may also be facing certain performance because of past decisions made by other executives (Barnett and Pollock, 2012). Due to these premises, I argue that LTIP can also create an optimal solution in determining worthiness over the long run.

A study published in the Journal of Business in 2005 is the first to have addressed executive compensation in relation to corporate investment decisions, more specifically in equity issuance. The findings suggest that when the executive is paid to motivate and incentivize him or her, the manager will make the optimal capital structure decision in line with shareholder interests because the market will price the stock accordingly in response to seasoned equity offerings (Datta, Iskandar-Datta and Raman, 2005). Assuming a manager wants to maximize his or her wealth, by focusing on CEOs who receive more compensation through the LTIP because of their own personal benefit, the study evaluated the relationship between CEOs acting on a large run-up of stock price prior to the seasoned equity offering.

Risk bearing is necessary to explore as well especially in relation to LTIP as this involves a transfer of risk. As more of the executive's income gets placed on the line, this increases the perceived risk to the executive leading to more risk averse decisions or decisions that are risky based on the frame of the risk taking. "Positively valued stock options create risk bearing when executives anticipate the returns from exercising those options in the future which increases executive risk aversion (Wiseman and Gomez-Mejia, 1998: 138)." As executives seek to increase personal wealth, linking that wealth to firm owners, executives will then have aligned incentives to make similar strategic options. By transferring from base pay into variable pay, or viewing it as certain pay to uncertain pay, the executive can view this as a loss. Hence, the understanding of risk is so crucial in our comprehending of how this can affect decisions and direction of the company.

Ownership Structure and Monitoring

Another consistency with the agency theory is the diffusion of share ownership. For instance, the more widely-held the firm, the less incentive for one shareholder to feign strong interest in the actions of the executive in aligning his or her decisions to the best interests of the shareholders. Consequently, with a wider range of owners the executive gains more control. The opposite notion holds true as well, with a closely held ownership structure, there is a greater incentive and leverage for the few shareholders to express interest in the decision-making of the executive (Magnan, St-Onge and Thorne, 1995). This provides greater insight into agency theory where time over time executives will attend more to their

own personal interests than shareholders' interests. Thus, it is also reasonable to believe that executives will compensate themselves at a more plentiful amount when less supervised or in a more widely held firm (Magnan, St-Onge and Thorne, 1995).

Concentrated owners or more powerful shareholders can be viewed as having higher expectations and not accepting management strategies they deem to be ineffective. While on the other hand, dispersed owners are much more difficult to track as they are not as involved with the minute details of the company. Therefore, this can explain why active and concentrated ownership have a real effect on base pay.

Moreover, as mentioned previously, agents are risk averse, making performance-contingent compensation unfavorable compared to a more fixed compensation scheme. In a firm where stock is widely held, an executive has a stronger incentive to avoid the performance-contingent compensation scheme because it exposes the executive to a greater spread of risk (Magnan, St-Onge and Thorne, 1995). "Dispersed ownership not only reduces risk sharing at the top but it also reduces risk sharing for the entire organization, suggesting that if CEO monitoring is weak then internal controls (as reflected in pay-performance relations) are also weak" (Werner, Tosi and Gomez-Mejia, 2005: 379).

However, in this study I attempt to show the difference of risk appetite and interests between shareholders and block holders. Block holders are shareholders who own a 5% or more stake in the firm. Even a basic understanding of supply and demand will illustrate the point that block holders are more hesitant to dump their holdings quickly, therefore, they are more vested in the firm and will act accordingly. And while there may be differing views even among shareholders, ultimately, among block holders there are not because of their

large stake in the company. The more block holders there are will result in more accountability and a tighter grip of expectations of which the executives will be held.

CEO monitoring is of great importance. This is the term used to describe the observance of executives directly by shareholders. Block holders will inevitably serve as strong monitors, hence, more monitoring is rationalized by more block holders. The absence of supervision or monitoring leads to misalignment and confusion between both executives and shareholders. Hence, a great deal of behavioral theory is integrated within monitoring because ultimately an increase in monitoring also leads to greater expectations (Wade, Porac and Pollock, 1997).

When CEOs and shareholders have similar backgrounds, they may also be more inclined to move forward with a risky decision. They are able to use that credibility from past experiences and build confidence, coherence and momentum among the constituents that there is probability of success in the new venture instead of just one person advocating for a certain viewpoint (Wiseman and Gomez-Mejia, 1998). The same holds true for block holders. However, making risky decisions based on performance expectations can be muddled because of monitoring and performance evaluation. Executives prefer internal measures of performance such as accounting, while shareholders prefer external indicators of performance that are market based. Hence, the extent of monitoring matters because of how executives are being evaluated based off of different returns. The more supervision, the higher expectations, therefore the risk level changes as well.

Ultimately, there is a great deal of moving parts to this study. Prospect theory provides a great deal of insight into the layers of risk and how risk differs between executives

and shareholders and block holders. But by attempting to untangle this web, and use LTIP as a way to align the interests of executives, shareholders and block holders, the idea of risk can be more greatly understood. In the upcoming chapters is where the actual study is conducted and explored further following the hypotheses.

Chapter 3

Hypotheses

Due to the deeply vested interest block holders have in their stake in the company and their inability to quickly liquidate their position, I argue that they will be very involved with the actions the CEO takes. Furthermore, they will also pay great attention to that CEO's compensation package in order to maintain a tight grip on their actions in hope to steer the CEO's interest in line with their own. Due to this and what has already been explored in regards to executive remuneration:

***H1:** The number of block holders has a negative relationship with total CEO pay.*

Moreover, this will effect the LTIP compensation as well. In order to develop a greater alignment between the block holders and CEOs over the long term, there will be more compensation awarded in the LTIP. Hence, leading to the following hypotheses:

***H2:** The number of block holders has a positive relationship with LTIP.*

***H3:** The number of block holders also has a positive relationship with the proportion of LTIP to total pay.*

As more compensation is rewarded through LTIP, this will increase the risk perceived by the CEO due to the ideas illustrated in prospect theory. As more future compensation shifts towards the greater unknown a CEO will act more risk averse. However, the opposite is likely to occur if total compensation as a whole increases due to the house money effect and hubris.

***H4:** LTIP has a negative relationship with the debt to equity ratio.*

***H5:** Proportion of LTIP to total compensation also has a negative relationship with the debt to equity ratio.*

***H6:** Total executive pay has a positive relationship with the debt to equity ratio.*

Similarly, just as this long-term risk is perceived and weighed more heavily by the CEO, the block holders are likely to portray comparable tendencies if not stronger, due to an increase in monitoring, therefore:

***H7:** The number of block holders has a negative relationship with the debt to equity ratio.*

Lastly, the relationship between these variables may be heightened when combining the third variable, leading me to believe the analysis will support the following interactions:

***H8:** Both LTIP's and the proportion of LTIP to total pay's negative relationship with the debt to equity ratio is strengthened with the number of block holders.*

***H9:** Total pay's positive relationship with the debt to equity ratio will be weakened with the number of block holders.*

Chapter 4

Data Collection and Analysis

Data Sample and Method of Analysis

This study seeks to observe the 500 firms listed in the S&P 500 during the year of 2013. However, after accounting for missing data, 498 firms were observed. The data encompasses a wide range of variables for the years 2010-2013. Due to lagging certain variables, 2011 becomes the base year. The methodology used is the Statistical Analysis System, or SAS, to run a fixed effect panel regression. This type of regression was chosen because of the cross sectional and time series data gathered. Furthermore, to account for inconsistency among the variables, I use heteroscedastic values and standard errors.

Dependent Variables

Debt to Equity Ratio: The debt to equity ratio in a company is important for numerous reasons. This ratio indicates how leveraged a firm is and deciding on the ultimate ratio is the capital structure question each firm faces. The debt to equity ratio is an indicator of risk. A high debt to equity ratio could represent a firm fueling growth through excess leverage. The more debt used to finance operations of a company, the more potential earnings it can generate than it otherwise would have without this outside source of financing. The type of

industry the firm operates in could play a role since the debt to equity ratio can differ greatly depending on the sector. For example a manufacturing industry usually has a greater ratio than computer companies because it is much more capital intensive. Although I do not account for type of industry, there are different controls set in place.

Taking on additional leverage has its limits though, depending on the amount already borrowed, attempting to raise more capital through debt may be declined. Or if a company has too much debt, it may face default risk, which can lead to other unintended consequences, such as bankruptcy. On the other hand, debt is an alternative to equity financing because the more financing done through equity, the firm risks losing control of the company because of the dilution of ownership and also has to consider dividend payments in the future. Due to a combination of these reasons, is ultimately why I chose to use the debt to equity ratio as the measure of risk. Determining the equity for each firm to calculate the leverage ratio was computed by multiplying year-end shares outstanding by year-end stock price. Total liabilities were extracted from Compustat.

Total Compensation, Long Term Incentive Payout, and the Proportion of the two (LTIP/ Total Compensation): These measures were all obtained through Execucomp. The LTIP is the gauge for determining personal risk. This figure was constructed by subtracting a CEO's annual salary and bonus from their total compensation package, which includes the cash compensation package along with stock options, restricted stock grants and the value of all other options exercised. In order to compute personal risk as a percentage or proportion, I divided the long-term measure of compensation by total compensation.

Independent Variables

Block Holders: A shareholder owning 5% or more of company stock is considered a block holder. The number of block holders for each firm throughout the years 2010-2013 was extracted through data from Fact Set. It is critical to recall the difference between shareholders and block holders.

Control Variables

CEO Age, Market Return, Gender and Year Dummy: As a person ages and is exposed to a variety of different experiences, this ultimately leaves an impression on risk perception. CEO age is therefore accounted for in this study. Market returns signal the abilities and potentials of a company and have a great influence on CEO compensation. Higher returns have a positive relationship with compensation as already signaled by past studies, but how this relates to risk is yet to be further explored. In this study, market return is accounted for through a lag variable. Lastly, I created a dummy for gender and year. Male was coded as a 1 and years 2012 and 2013 were dummy coded. 2010 was used for creating lags and since 2011 was the baseline year it was absorbed into the intercept value.

Sales and Total Assets: Capital structure, executive remuneration and the debt to equity ratio can vary drastically across different industries and various firm sizes. Therefore, there are two specific controls set in place to offset this disparity. Those controls are sales and total assets of each company collected annually through Compustat. Both of these variables were log-transformed in order to account for extreme values.

Results and Analysis

Included below are three models exhibiting the results of the regressions. Table 1 displays correlation and descriptive statistics of the variables in the analysis, Table 2 shows the relationship of specific independent variables applied strategically to determine five different debt to equity models and Table 3 is a hybrid. Table 3 includes three separate models accounting for relationships with the three different compensation measures: total compensation, the long-term incentive payout plan and the proportion of CEO pay that is LTIP.

The results are interesting; H1 was supported, as Table 3 demonstrates a significant negative relationship at the 99% confidence level of the relationship between block holders and total CEO compensation. This strengthens the notion that the more block holders there are with a profound interest in the company because of their large stake, the more they act as monitors and do not want to observe excess compensation for the CEO. Their supervision leads to tighter controls in an effort to align the interests of the two; CEOs and block holders.

Furthermore, there is a positive relationship between the debt to equity ratio and the total compensation, suggesting that hubris and the house money effect may be operating. While I was expecting the opposite relationship, this clearly indicates the presence of prospect theory. CEO age clearly plays a role in this variable as well, as there is a positive relationship markedly present and we can confirm this piece of already known literature.

The findings demonstrate that H2 is not supported. Although the relationship between the number of block holders and LTIP is significant, it is negative rather than positive. There could be a few reasons to explain this such as when the LTIP was adopted and implemented

(Westphal and Zajac, 1994). H3 findings also suggest the opposite relationship, different than expected, suggesting a negative relationship between the number of block holders and the proportion of LTIP to total pay. On the other hand, in this specific hypothesis, the lagged debt to equity ratio has a negative relationship with LTIP to total pay. This suggests that as the debt to equity ratio lessens, the proportion of LTIP compared to total pay becomes larger, which is interesting and difficult to explain as the opposite is what I would assume were to occur. However because of timing, this can be plausible.

Across all three of these specific models, the prior year dummy has a positive and strong relationship to the dependent compensation variables. It is also noteworthy to observe the absence of relation of market return on these three variables as prior studies suggest.

H4 projecting that LTIP has a negative relationship with debt to equity is different than predicated as well. This variable only seems to be significant in the model where proportion of LTIP to total pay is also accounted for in the equation and in this model it shows a positive relationship. Although an increase in LTIP is viewed as risky, here it suggests that it is only risky when it is considered in relation to total compensation since H5 portrays results that are greatly in line with what was predicted. The numbers reveal a solid negative relationship between the proportion of LTIP to total compensation in relation to the debt to equity ratio. Furthermore, H6 predicting total executive pay will have a positive relationship with risk is correct, suggesting a genuine relationship with a 95% confidence level.

What the results to these three hypotheses indicate is that a CEO views LTIP as a way to generate even more return when taking on excess risk because of their inherent tie to the

company stock. However, when it is compared to total compensation as a whole, he or she is more likely to act risk averse because it is deemed to have a greater impact on the whole.

This heightens the framing perspective and provides greater insight on the subject. When the return is seen as a chunk out of total pay, risk aversion sets in, but without this comparison, LTIP is viewed as a more variable pay and therefore, a way to increase earnings. The infamous reference point is used accordingly as is reflected in total compensation as well.

H7 does not suggest much since it is not statistically significant except for in one model where LTIP is included but nonetheless the negative relationship is valid. While there is not a strong connection that demonstrates that the more block holders invested in the company lead to less financial leverage undertaken, the trend that is emerging is that the block holders influence the compensation which then navigates the amount of debt. This development and interaction is tested in H8 and H9, and with insignificant results do not suggest much of a relationship. The reason this could be weak is because the consequences of these decisions may not be prevalent and evident until a few years down the road.

Evidently viewable throughout all models predicting risk, there is a strong negative relationship between lagged market return and the debt to equity ratio. According to prospect theory and the concept of loss aversion, this could be credited to the belief that because there is not much on the line since the firm is already performing poorly, why not take on more risk as an effort to spur return. This concept is definitely worthy of future research among other ideas, as will be mentioned in the final chapter.

Table 1: Correlation and Descriptive Statistics

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1 Debt to Equity	1.619	3.474	1																			
2 Block Holders	2.013	1.294	-0.08	1																		
3 LTIP	23526.000	21601.980	0.01	-0.2	1																	
4 Total Compensation	28617.130	23302.120	0.07	-0.22	0.98	1																
5 CEO Age	55.719	5.960	0.04	-0.03	0.05	0.08	1															
6 Proportion LTIP/Total Comp.	0.796	0.124	-0.17	-0.04	0.36	0.23	-0.05	1														
7 Lagged Debt to Equity	1.737	3.776	0.91	-0.08	0.02	0.07	0.06	-0.15	1													
8 Lagged Market Return	15.533	27.894	-0.1	0.03	0.05	0.04	0	0.05	-0.13	1												
9 Lagged Total Compensation	28264.180	24949.210	0.06	-0.22	0.69	0.72	0.08	0.12	0.06	0.04	1											
10 Lagged LTIP	23157.190	23385.750	0.01	-0.2	0.68	0.67	0.05	0.23	0.01	0.04	0.97	1										
11 Lagged Block Holders	1.897	1.302	-0.08	0.74	-0.21	-0.24	-0.07	-0.07	-0.08	0.03	-0.25	-0.22	1									
12 Lagged Proportion LTIP/Total Comp.	0.789	0.132	-0.17	-0.07	0.18	0.08	-0.06	0.65	-0.16	0.02	0.23	0.36	-0.09	1								
13 Male Dummy	0.885	0.319	0.01	0.01	-0.02	-0.03	0.02	0	0.01	0.05	-0.03	-0.02	0	-0.01	1							
14 Debt to Equity Log	-0.448	1.262	0.71	-0.04	-0.04	0.01	0.07	-0.19	0.7	-0.2	0.03	-0.03	-0.04	-0.2	-0.07	1						
15 Total Compensation Log	10.069	0.602	0.1	-0.23	0.77	0.82	0.1	0.41	0.1	0.01	0.61	0.55	-0.28	0.18	-0.06	0.08	1					
16 Lagged Total Compensation Log	10.069	0.602	0.09	-0.25	0.59	0.64	0.08	0.24	0.09	0.01	0.81	0.76	-0.29	0.4	-0.07	0.09	0.76	1				
17 Lagged LTIP Log	9.824	0.714	0.02	-0.23	0.53	0.54	0.05	0.4	0.03	0.01	0.73	0.73	-0.27	0.67	-0.06	0.02	0.67	0.94	1			
18 LTIP Log	9.824	0.713	0.04	-0.21	0.75	0.76	0.07	0.62	0.05	0.02	0.55	0.53	-0.26	0.32	-0.05	0.02	0.97	0.71	0.68	1		
19 Sales Log	9.089	1.186	0.01	0.01	-0.01	-0.01	0	-0.04	0.02	-0.02	0.02	0.01	0	-0.02	0.01	0.02	-0.01	0	-0.01	-0.02	1	
20 Total Assets Log	9.707	1.325	0	0.03	-0.02	-0.01	0.01	-0.04	0.00	-0.01	-0.02	-0.03	0.04	-0.05	0.04	0.02	-0.02	-0.04	-0.05	-0.03	0.71	1

Table 2: Models Predicting Debt to Equity

	1	2	3	4	5	6
12 Dummy	-0.58137** <i>0.26161</i>	-0.59620** <i>0.26503</i>	-0.55615** <i>0.26264</i>	-0.57315** <i>0.26597</i>	-0.48963** <i>0.25241</i>	-0.49763** <i>0.25509</i>
13 Dummy	-0.74180*** <i>0.24829</i>	-0.69746*** <i>0.24046</i>	-0.70756*** <i>0.24796</i>	-0.65514*** <i>0.23951</i>	-0.63362*** <i>0.23684</i>	-0.61016*** <i>0.23074</i>
CEO Age	0.02800** <i>0.01293</i>	0.02816** <i>0.01295</i>	0.03025** <i>0.01265</i>	0.03036** <i>0.01267</i>	0.01172 <i>0.01383</i>	0.01188 <i>0.01383</i>
Total Assets (Log)	-0.00101 <i>0.10443</i>	-0.00095075 <i>0.10434</i>	-0.00754 <i>0.10453</i>	-0.00763 <i>0.10440</i>	-0.02855 <i>0.10021</i>	0.02827 <i>0.10025</i>
Sales (Log)	0.01714 <i>0.12247</i>	0.01895 <i>0.12211</i>	0.02217 <i>0.12259</i>	0.02457 <i>0.12217</i>	0.02230 <i>0.11853</i>	0.02342 <i>0.11817</i>
Male Dummy	0.34367 <i>0.30729</i>	0.34413 <i>0.30769</i>	0.26572 <i>0.29803</i>	0.26775 <i>0.29912</i>	0.45869 <i>0.29088</i>	0.46200 <i>0.29152</i>
Lagged Market Return	-0.01504*** <i>0.00395</i>	-0.01514*** <i>0.00399</i>	-0.01477*** <i>0.00398</i>	-0.01489*** <i>0.00402</i>	-0.01409*** <i>0.00366</i>	-0.01414*** <i>0.00368</i>
Lagged Block Holder	-0.11935 <i>0.07711</i>	-0.02791 <i>0.10262</i>	-0.17150** <i>0.07848</i>	-0.06379 <i>0.10127</i>	-0.09176 <i>0.07385</i>	-0.04329 <i>0.09894</i>
Lagged Total Compensation (Log)	0.46682** <i>0.18236</i>	0.47838** <i>0.18682</i>				
Lagged LTIP (Log)			0.06057 <i>0.14146</i>	0.08290 <i>0.14821</i>	1.17246*** <i>0.25694</i>	1.16851*** <i>0.25616</i>
Lagged Proportional Comp.					-9.07394*** <i>1.67886</i>	-8.87327*** <i>1.67931</i>
Lag Ttl Comp. Log * Blkhldr		-0.01320 <i>0.01062</i>				
Lag LTIP Log * Blkhldr				-0.01587 <i>0.01063</i>		
Lag Prop Comp. * Blkhldr						-0.08928 <i>0.11356</i>
Constant	-4.2072** <i>2.05366</i>	-4.25698** <i>2.07234</i>	-0.06553 <i>1.66459</i>	-0.20655 <i>1.69951</i>	-2.92450 <i>1.78912</i>	-3.01969* <i>1.80657</i>
Observations	1327	1327	1327	1327	1327	1327
R-Square	0.0301	0.0310	0.0247	0.0260	0.0809	0.0812
F-Value	4.54	4.21	3.70	3.51	11.58	10.56

Standard errors in italics

*Significant at 10%

**Significant at 5%

***Significant at 1%

Table 3: Models Predicting Various Compensation Schemes

	Total Comp. (Log)	LTIP (Log)	LTIP/Total Comp.
12 Dummy	0.05894 <i>0.04161</i>	0.07355 <i>0.04882</i>	0.01484* <i>0.00804</i>
13 Dummy	0.09696*** <i>0.03730</i>	0.13949*** <i>0.04223</i>	0.02809*** <i>0.00696</i>
CEO Age	0.00664** <i>0.00302</i>	0.00496 <i>0.00351</i>	-0.00110* <i>0.00063586</i>
Total Assets (Log)	0.00447 <i>0.01569</i>	0.00265 <i>0.01836</i>	-0.00226 <i>0.00305</i>
Sales (Log)	-0.00966 <i>0.01824</i>	-0.01445 <i>0.02186</i>	-0.00105 <i>0.00358</i>
Male Dummy	-0.16976** <i>0.06797</i>	-0.17478** <i>0.07616</i>	-0.00073699 <i>0.01264</i>
Lagged Market Return	0.00082116 <i>0.00066977</i>	0.00099189 <i>0.00080828</i>	0.00017472 <i>0.00012281</i>
Lagged Block Holder	-0.12166*** <i>0.01202</i>	-0.13217*** <i>0.01404</i>	-0.00773*** <i>0.00243</i>
Lagged Debt to Equity	0.01273*** <i>0.00358</i>	0.00599 <i>0.00386</i>	-0.00444*** <i>0.00112</i>
Constant	10.08266*** <i>0.22674</i>	10.02514*** <i>0.26445</i>	0.90569*** <i>0.04409</i>
Observations	1327	1327	1327
R-Square	0.1022	0.0848	0.0470
F-Value	16.66	13.57	7.22

Standard errors in italics

*Significant at 10%

**Significant at 5%

***Significant at 1%

Chapter 5

Conclusion

This study evaluated the effect of a long-term incentive plan on a CEO's risk perception and how that translated to the amount of financial leverage undertaken by a firm. The study also analyzed how the ownership structure through the amount of block holders impacted the LTIP and influenced the CEO. The empirical analysis specifically focused on certain variables to evaluate the relationship and the results found were both in line with expectations as well as challenged the assumptions made previously in the literature review.

While shareholders usually display a risk neutral mindset, block holders view risk differently because of their inability to liquidate a position as easily. CEO's can display a varying amount of risk appetite depending on their past experiences and reference points. Furthermore, depending on the structure of their compensation package they are more likely to act accordingly with how they perceive risk. The more variable pay, or LTIP, can either make a CEO act risk averse when comparing it to total compensation or take large risk because of hubris, the house money effect, loss aversion or reference points set from prior performance.

The increase in LTIP in relation to total compensation is viewed as a more risky scheme; therefore, there was a negative relationship with the debt to equity ratio while LTIP individually had a positive relationship with leverage. Total compensation did as well. While these findings suggest certain themes in prospect theory, these relationships were not

strengthened or weakened by the amount of block holders. However, this study's findings do indicate that the amount of block holders does indeed influence LTIP and the proportion of LTIP to total pay.

Future Research

While this study encompassed a variety of variables, there are still many that could have been included to address this topic from a multitude of angles. CEO tenure was not taken into account and is definitely a factor in risk perception from the lenses of the CEO as well as if the CEO feels that his or her tenure is in jeopardy if they make strategic decisions that can lead to certain outcomes. Furthermore, past experiences clearly play an integral role in reference points. Future research might address this and whether time is an influence on these variables.

Furthermore, not only should background be addressed, but overlapping backgrounds between CEOs and block holders as well. Decisions are more likely to be executed when key decision makers have similar experiences because they are validated among one another. The types of investors can be investigated depending on their personality traits and how many other boards they might hold strong allegiance to will determine how much time they dedicate to the individual firm. A CEO's traits should be more intimately studied as well since hubris is just one example of a personality trait influencing decision-making.

Another metric to be used could include shareholder proposals. These proposals could provide insight into how involved the block holders truly are and to what specifically they advocate for whether it be compensation, leverage or a variety of other factors influencing

the firm achieving its greatest value. There has been a growing trend in shareholder activism and by incorporating this into the study, it could have a strong effect on risk perception and appetite.

Lastly, a critical component to the entirety of this subject is company performance. Company performance plays a huge role in determining executive compensation and monitoring performed by the board. Company performance is also indicative of firm size and industry. Moreover, performance may lead to certain payout structures that influence the CEO's risk perception. Because of what we know from prospect theory, it would be interesting to see the CEO's reference point movement depending on prior gains or losses. An example would be a high performing firm taking on more drastic and riskier measures to increase the likelihood of continued increased performance. Or we could observe the opposite, a CEO wanting to protect its variable pay because after all- it is variable. Overall, it will be fascinating to see this subject expanded on as more are becoming aware of the integral part that risk plays in relation to CEOs and block holders.

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