THE ROLE OF POLITICS IN REPRICING EXECUTIVE OPTIONS

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ABSTRACT

We explore how CEO power impacts executive option repricing. The spread between the option strike price and the market value of the stock impacts the likelihood of repricing. This effect is enhanced when the CEO is the Chairman of the Board. Firm and CEO visibility, having more board members appointed after the CEO, having a classified board, and higher percentages of CEO and institutional ownership reduce the impact of spread on the likelihood of repricing.
For years agency theorists have argued that the use of long-term compensation tools such as stock options serve as effective mechanisms to align management's interests with those of shareholders (e.g., Fama & Jensen, 1983; Jensen & Meckling, 1976). The alignment of managerial and shareholder interests is achieved by tying a significant portion of an executive's compensation to the market performance of the company's stock. Long-term incentive plans have proliferated over the last twenty years as agency arguments regarding incentive compensation have increased in popularity, becoming the "dominant logic" in executive compensation.

Although a number of papers have explored the role of stock options in incentive compensation (see Gomez-Mejia & Wiseman [1997] and Murphy [1998] for reviews of the literature in this area), there have been relatively few studies that have examined issues such as how, when, and why stock options get repriced (e.g., Brenner, Sundaram & Yermack, 2000; Carter & Lynch, 2001; Chance, Kumar & Todd, 2000). Option repricing occurs when the board of directors elects to either adjust the exercise price (also known as the strike price) of an executive's existing options downward, or to cancel an executive's existing options and grant him or her new options with a lower strike price. Although companies argue that option repricing ultimately benefits shareholders (Chance et al., 2000), investors generally view repricing negatively and consider it to be "rewarding failure" (Byrne, 1998; Martinez, 1998).

The purpose of this study is to develop a framework for understanding why some companies reprice options while others do not. Since option repricing can be considered a "breakdown" in the agency relationship (Chance et al., 2000), we move beyond traditional agency explanations and explore how CEO power, the power of outside stockholders, and the visibility of the company and its CEO enhance or reduce the likelihood that option repricing will occur. In this study we pursue a finer-grained approach than previous research, which typically
utilize annual time intervals (e.g., Brenner et al., 2000; Carter & Lynch, 2001; Chance et al., 2000), and examine how the power of the CEO interacts with the difference between the average strike price of options and the current market price of the stock (what we hereafter refer to as the "negative spread"), observed on a monthly basis, to impact the decision to reprice.

THEORY AND HYPOTHESES

Option repricing generally occurs following a sharp decline in the stock price of the company that places the current market value of the company's stock below the strike price of executives' options (making their options "out of the money" or "underwater"). External market forces beyond the control of management are often blamed for these precipitous drops, and repricing is commonly justified by the need to retain and motivate the current management team. However, as reported in the business press, option repricing often occurs over the howls of protest from shareholders who have also suffered financial losses from the drop in stock price (e.g., Byrne, 1998; Martinez, 1998). Indeed, these strong negative reactions from shareholders have led Patrick McGurn, the Director of Corporate Programs for proxy advisory service Institutional Shareholder Services, Inc., to conclude that option repricing has become, "the pre-eminent concern on the compensation front for shareholders" (Martinez, 1998). Because of the negative publicity option repricing generates, and the repercussions it can have for a company and the legitimacy of its claims regarding other compensation practices, repricing offers an ideal opportunity to explore how the power of key stakeholders and the CEO influence whether or not a company takes actions that can have these potentially damaging results.

Although agency theoretic arguments such as the realignment of management's interests with those of shareholders are often used to justify the decision to reprice options, the resistance of stockholders to repricing (e.g., Byrne, 1998; Martinez, 1998) suggests that option repricing
nonetheless represents a breakdown in the agency relationship between managers and stockholders (Brenner, et al., 2000; Chance et al., 2000). Prior research has found no empirical support for board claims that industry conditions beyond the control of management (Brenner et al., 2000; Chance et al., 2000; Carter & Lynch, 2001), or being in an industry where management is in high demand (Brenner et al., 2000), drives the need to reprice. In addition, Chance et al.'s findings that repriced options averaged 5.5 years until expiration, and that half of the repriced options would have been in the money within 19 months had they not been repriced, calls into question board claims regarding the inability of the option grants to motivate and/or retain employees at their current strike prices. Alternative theoretical explanations may provide a better understanding of what factors influence decisions to reprice executive options.

**Option Strike Price/Market Price Spread**

Recent research (e.g., Sanders, 2001; Wiseman & Gomez-Mejia, 1998) has suggested that executives will make different decisions depending on whether or not their incentive compensation is in a loss position. Drawing on prospect theory (Khaneman & Tversky, 1979; Sitkin & Wiengart, 1995), scholars have argued that executives facing real losses will make riskier decisions than executives in a gain or neutral position. They have also argued that contextual factors can impact the framing of the decision and the evaluation of the risks. For example, Sanders (2001) argued and found that poor firm performance created a negative frame, thereby minimizing risk perceptions and increasing risky behaviors when CEOs had larger amounts of stock option pay.

In the context of stock option repricing, the difference between the strike price of the executives’ options and the market price of the stock is an important contextual factor that can impact decision framing and perceptions of risk (Carter & Lynch, 2001). Although, as Sanders
points out, executives do not suffer real economic losses when their stock price declines, they may still perceive that a loss has occurred (Wiseman & Gomez-Mejia, 1998). The greater the negative spread, the greater the perceived loss, and the lower the probability that the market value of the stock will exceed the strike price of the option before it expires. This change in spread may reduce both the CEO's and the board's concerns with the negative ramifications of repricing for the firm, thereby increasing the likelihood that the board will act in the CEO's interests and reprice his/her options.

Hypothesis 1: The greater the negative spread (defined as the strike price of the CEO's options minus the market value of the stock), the more likely the options are to be repriced.

While change in spread is likely the primary driver of whether or not options are repriced, the power of the CEO and key stakeholders can be expected to moderate its influence on the likelihood of a repricing event. We focus on the moderating effects, rather than the main effects of these factors in developing our arguments because there is no real incentive to reprice options if performance is high and all options are in the money. Thus, a negative spread is a necessary contextual condition in order for these factors to be effective.

Ownership Sources of Power

Finkelstein suggested that, "Power accrues to managers in their capacity as agents acting on behalf of shareholders. Hence, the strength of a manager's position in the agent-principal relationship determines ownership power" (1992: 509). Ownership power thus depends on both the concentration of stock in the hands of interested and active outsider shareholders, as well as in the hands of the CEO him/herself (Tosi et al., 1999).

Institutional stock ownership. Recent research has suggested that institutional investors are becoming an increasingly important group of shareholders with the potential to check self-
promoting behavior on the part of management (David, Kochhar, & Levitas, 1998; Useem, 1996). According to these arguments, institutions are more likely to engage in proactive behavior because it is more difficult for them to exit without significantly depressing the price of the stock (David & Kochar, 1996), because they possess greater economies of scale in monitoring compensation policy (Black, 1992), and because they possess an increased ability for collective action (Davis & Thompson, 1994). Support has been found for the proposition that both high and low aggregate ownership institutional investors serve to mitigate the power of executives and have the power to influence compensation policies (Useem, 1996; Wahal, 1996). Anecdotal evidence is consistent with theoretical expectations that institutional investors generally react negatively and will oppose executive option repricing (e.g., Byrne, 1998; Martinez, 1998). For example, Martinez notes that the State of Wisconsin Investment Board claims it recently persuaded 16 companies in which it holds stakes to adopt a policy requiring shareholder approval of any future repricings.

Finally, it is also possible that institutional investors may not even have to actively exercise their power in order to have a significant impact on the repricing decision. As managers become more sensitive to the reactions of institutional owners, concerns vis-a-vis these important constituents may lead to a decrease in the probability that a company will decide to take actions that outsiders may perceive negatively (Porac et al., 1999; Wade et al., 1997); in this case, repricing executives' options. Given the preceding arguments, it is reasonable to assume that stock ownership by institutional investors may dampen the effect of spread on option repricing.

Hypothesis 2: Institutional stock ownership will interact with negative spread to decrease the likelihood of option repricing.

CEO stock ownership. Much of the research in the agency tradition focusing on the ownership structure of the firm has typically made a distinction between "owner-controlled"
firms, where a single outside shareholder owns 5% or more of the voting shares, and "management-controlled" firms, where no single major outside shareholder exists (Gomez-Mejia & Wiseman, 1997). Current theorizing suggests a third category - "owner-managed" firms - where an insider owns 5% or more of the company's stock (Tosi et al., 1999). Strong support has been found for an inverse relation between CEO ownership concentration and managerial self-serving behavior. Murphy suggests that the "natural measure of CEO incentives and [indicator of] the severity of the agency problem is the percentage ownership [of the CEO]" (1998: 32). In terms of conflicts of interest between managers and shareholders, Murphy reports that increases in the percentage of direct CEO ownership (holding dollar ownership constant) reduces agency problems related to perquisite compensation and is the strongest disincentive to managerial self-serving behavior (Jensen & Murphy, 1990; Murphy, 1998). In addition, Sanders (2001) found that CEO stock ownership was negatively associated with taking riskier organizational actions. Although option repricing reduces the individual risk to the executive, it increases the risk to the organization of a negative backlash from shareholders and/or the business press, and thus may be regarded as engaging in a riskier organizational activity. Therefore, like institutional ownership, CEO stock ownership may dampen the effect of negative spread on the likelihood of repricing.

*Hypothesis 3: CEO stock ownership will interact with negative spread to decrease the likelihood of option repricing.*  

**Structural Sources of CEO Power**

Finkelstein notes that, "Managers who have a legislative right to exert influence are influential. Hence, CEOs have high structural power…because of their formal organizational position" (1992: 506). In addition to the formal positions held by the CEO, such as holding both the chief executive and chairman of the board positions (Wade, O’Reilly, & Chandratat, 1990;
Zajac & Westphal, 1995), other organizational structures and rules protect the CEO from outside influence and enhance CEO power.

Both agency theory (Fama & Jensen, 1983; Weisbach, 1988) and the sociopolitical literature on executive compensation and top management teams (Belliveau et al., 1996; Main, O’Reilly, & Wade, 1995) suggest that the composition of the board of directors has important implications for the CEO’s power. Recent research suggests that the ability of the CEO to nominate board members, both insiders and outsiders, can significantly enhance the CEO's power by allowing the CEO to select board members that will be loyal, as well as by increasing the directors’ dependence on the CEO for their board seats (Belliveau et al., 1996; Wade et al, 1990; Zajac & Westphal, 1995). This is consistent with previous research (e.g., Brenner et al., 2000) which found that the presence of a board member on the compensation committee who also has a dependent relationship with the organization (i.e., provides legal, consulting or other services to the firm that could compromise his/her independence) was positively associated with repricing.

Putting in place barriers to prevent hostile takeovers can also enhance CEO power by reducing the effectiveness of the market for corporate control and enhancing his/her ability to engage in other unpopular activities, such as repricing executive options (e.g., Sundaramurthy, Rechner & Wang, 1996; Weston, Chung & Siu, 1998). Staggered elections of board members, poison pills, and the creation and use of employee stock option plans have all been used to reduce the likelihood of a hostile takeover that could result in the ousting of the current management team (Weston et al., 1998), even if the takeover would be in the best financial interests of the stockholders.
A CEO's structural power is expected to affect the likelihood of whether option packages are considered for repricing. As Finkelstein (1992) has noted, the sources and exercise of power are context specific. Thus, appropriate conditions must exist in order for CEO power to impact the decision to reprice. Holding underwater options creates such a condition for the CEO. In this context, we expect CEO structural power to moderate the effect of negative spread in such a way as to increase the chances of such an event occurring. The following hypothesis is proposed:

*Hypothesis 4: CEO structural power will interact with negative spread to increase the likelihood of option repricing.*

**Visibility**

Given that repricing is likely to generate a great deal of negative sentiment among shareholders, the visibility of the action may create concerns for companies considering repricing executive options. Boards may be less likely to engage in self-serving behaviors on the CEO's behalf if they feel the action is more likely to be observed and discussed publicly. Research has shown that high visibility increases a firm’s susceptibility to influence from outside constituents (e.g., Edelman, 1990, 1992). Two factors that may increase the visibility of the repricing event are the size of the firm and the amount of compensation the CEO receives.

Edelman (1990, 1992) has argued that, because of their high visibility, large firms felt pressure to adopt formal grievance procedures, even though the existing laws did not specifically require them to do so. Mishina et al. (2000) found that large firms are more likely to be the targets of shareholder activists proposing corporate governance resolutions. Large firms are also more likely to be evaluated by industry observers and discussed more in the business press than small organizations (Bhushan, 1989). Previous repricing studies have found firm size to be negatively associated with the likelihood of repricing (Brenner et al., 2000; Chance et al., 2000). Although neither study provides an *ex ante* theoretical explanation for why smaller firms would
be more likely to reprice than larger firms, Chance et al. (2000) speculated this finding was due to the visibility of larger firms and the amount of attention the business press gives repricing.

CEO compensation can also draw attention to a firm and enhance the threat associated with the decision to reprice executives' options (e.g., Porac, et al., 1999; Wade, et. al, 1997). Popular business periodicals such as Business Week and Fortune publish annual reports highlighting the compensation packages of the highest paid CEOs, and compensation consultants have decried the astronomical levels of CEO pay (e.g., Crystal, 1991). In the academic literature, research has found that higher levels of CEO annual and long-term compensation were associated with more frequent discussions of both external validations of CEO pay and the performance measures used to calculate bonuses when justifying executive compensation (Wade et al., 1997). CEO pay has also been associated with increased efforts to obfuscate performance comparisons by including companies outside a firm's primary industry in its self-reported industry peer groups (Porac et al., 1999). A CEO's current compensation, and the degree to which repricing his or her options may be perceived as excessive, could therefore be expected to moderate the effect of spread and influence the likelihood that a repricing event will occur.

_Hypothesis 5: CEO and firm visibility will interact with negative spread to decrease the likelihood of option repricing._

**METHODS**

**Sample**

We examined repricing events that occurred during the latter six months of 1998 as a "natural experimental setting." During this time period the market as a whole suffered a significant downturn and subsequent recovery. The brief but intense decline in the overall market created enhanced conditions for observing option repricing. Indeed, a number of option repricing events were reported to have occurred during this time period (e.g. Johnston, 1998).
To examine the determinants of stock option repricing we selected a single industry - computer software - where options have become an important component of executive compensation packages (Carter & Lynch, 2001). By selecting a single industry we were able to rule out cross-industry variations, including differential effects in compensation practices. The original sample included 391 publicly traded software companies listed in the Compustat database at the end of 1997. Due to difficulties associated with the timing of repricing events and fiscal year reports, we restricted our analyses to those firms whose fiscal year-ends are between January and June. Foreign firms, firms whose CEOs held no options, and firms that went bankrupt, merged, were acquired by another firm during 1998, or that conducted an initial public offering within one year of the period under study (thereby limiting the availability of necessary lagged data) were also dropped, resulting in a sample of 150 companies. Missing data reduced our final sample to 136 firms and 799 firm-month observations. T-tests reveal no differences between our final and original samples in terms of sales, net income, number of employees, or total shares outstanding. Compensation data and information on CEOs and boards of directors were drawn from firms’ 1999 and 1998 proxy statements. Company financial data was obtained from the Compustat database. Monthly stock price and market performance data was obtained from the CRSP database. Institutional and CEO ownership data was obtained from the Compact Disclosure database.

**Dependent Variable**

The dependent variable in the study is whether or not an option repricing event occurred during a monthly spell between July and December 1998. A repricing event was coded as having occurred if any prior option grant offered to the firm’s CEO was reported as being repriced during the last six months of 1998.
Independent Variables

The negative spread between the average strike price of the CEO's options and the current market price was determined on a monthly basis by subtracting the market price of the firm's stock at the beginning of each month from the weighted average strike price of all the CEO's option grants. Thus positive values for this measure indicate the degree to which a CEO's options are under water. The strike price of each option grant was weighted by the number of options associated with the grant. The weighted average of all grants was used because it is impossible to accurately assess which options, if any, will be repriced until the event occurs. It also helps adjust for the impact of the size and strike price differentials of the various grants. Because a weighted average of all grants was used, it is possible for the spread based on the overall average to be in the money even if one or more grants are substantially underwater.

Institutional ownership and CEO ownership were operationalized as the percentage of outstanding voting shares owned collectively by all institutions and the CEO, respectively, at the beginning of the period of study.

Three variables were used to operationalize CEO structural power. CEO duality is a dummy variable indicating whether or not the CEO was also the Chairman of the Board. CEO duality is a commonly used measure of CEO power (Wade et al., 1990). The number of board members appointed after the CEO is indicative of the CEO’s potential to "capture" and consolidate power over the board (Wade et al., 1990; Westphal & Zajac, 1998). Finally, a dummy variable indicating whether or not a company has a staggered board was also included as an indicator of CEO power. "Classifying" directors into different groups and staggering the elections of the classes so that only a minority of the board can be voted out in any one year makes it more difficult to take over a company and oust the CEO (Sundaramurthy et al., 1996).
Visibility was operationalized as *net sales* of the firm in fiscal 1997 and the *total cash compensation* (i.e., 1998 base salary + 1997 annual bonus) of the CEO. The use of sales as a proxy for firm size is well established in the literature, is appropriate given the nature of our industry, and is consistent with prior research on repricing (e.g., Brenner at al., 2000).

**Control Variables**

The *total value of the option package* "at risk" of being repriced at the beginning of the time period was included to control for the magnitude of the potential loss to the CEO. This measure was defined as the sum of the market price at the beginning of the study period minus the strike price of each grant multiplied by the number of shares underlying the options in that grant. Option grants that were underwater at the beginning of the study were assigned a value of zero. Although we recognize that options have a theoretical non-zero valuation up to the point of expiration (e.g., based on the use of the Black-Scholes or similar option valuation techniques), this simple calculation is more likely to be reflective of the valuation an executive will consider when determining how much money he or she may have "lost" due to a decline in stock price.

We also included a *monthly market performance* measure based on changes in the NASDAQ composite index to control for changes in general market conditions. *Board size* was included as a control because the size of the board can impact the number of board members appointed after the CEO.

The total value of the option package, institutional ownership, cash compensation, and sales were logged to reduce the effects of extreme values of these measures on the analyses. Since some companies had zero sales and/or institutional ownership, a 1 was added to these variables for all observations before logging.
Method of Analysis

Option repricing was modeled using discrete time event history techniques, which estimate logit models of dichotomous outcomes for pooled time series data where the same units are observed at multiple intervals (Allison, 1984; Yamaguchi, 1991). Covariates are allowed, but not required, to vary between time periods. Since the data contain multiple observations of the same CEO that are not independent across spells, we employed the cluster command using the Stata 6.0 statistical software package which provides a more conservative test of the hypotheses by using robust estimators of variance.

RESULTS

[Insert Table 1 About Here]

Table 1 summarizes the characteristics of repriced options. The average decline in stock price between June 1 and the month before the repricing event occurred was 46.7%; 53% of companies repricing options point to market factors in explaining this drop. However, the NASDAQ was up an average of 2.2% at the time firms repriced. This observation is consistent with prior research (Brenner et al., 2001; Chance et al., 2000) that found little systematic relationship between market conditions and stock price declines for companies that reprice.

CEOs that had their options repriced had their strike prices decreased by 50%, on average. In our sample, 82% of the companies claimed repricing was necessary to retain key personnel, and 65% of the companies suggested repricing was necessary to motivate employees and realign their interests with those of shareholders. Approximately 79% of the repriced options were back in the money by the end of 1999, based on the new strike prices. However, 64% of the CEO's would have been back in the money by the end of 1999 had their options not been repriced. Repricing increased the mean value of the CEO's options at the end of 1998 by an
average of $554,000, although this effect appears to be driven by the outsized $8.4 million gain of one CEO. The median increase is a more modest $59,175. By the end of 1999, however, the median increase due to repricing was over $200,000, and the mean increase was nearly $1,000,000.

[Insert Tables 2 & 3 About Here]

Table 2 presents a correlation matrix and descriptive statistics for all variables used in the models reported. Table 3 presents the results of the logistic regressions testing our hypotheses. The negative spread, or difference between the average option strike price and the market price of the stock, is positively and significantly related to repricing in four of the five models. Since positive values indicate the degree to which a CEO's options are underwater, Hypothesis 1 is supported. By multiplying a given coefficient by a change in the independent variable and then exponentiating it, we obtain the change in the odds of an event occurring versus not occurring. The effect of negative spread is relatively strong; for example, the increase in odds that results from a $5 increase in negative spread is \( \exp(.121 \times 5) = 1.83 \).

Model 2 supports Hypotheses 2 and 3, that institutional and CEO ownership will reduce the effect of negative spread on the likelihood of repricing. The interactive effects of both institutional ownership and CEO ownership on spread are negative and significant. Indeed, if the negative spread is $5 and the level of institutional ownership doubles, the effect on the odds of repricing decreases by a factor of two. These effects remain robust in the saturated model. Models 2 and 5 also result in significantly improved fits over the main effects model at the \( p < .05 \) level.

Model 3 tests Hypothesis 4, namely that CEO structural power will have a positive moderating effect on negative spread and enhance the probability of repricing. CEO duality has
the predicted positive and significant moderating effect. If the negative spread is $5 and the CEO is also the chairman, the impact of negative spread is increased by a factor of 1.7. The number of board members appointed after the CEO has a significant moderating effect, but it is in the opposite direction predicted by Hypothesis 4. The staggered board interaction is not significant in Model 3. In the saturated model duality continues to have a positive and significant effect, board members appointed after the CEO is no longer significant, and staggered board has a significant negative moderating effect. Thus, Hypothesis 4 is only partially supported.

Model 4 tests Hypothesis 5, that firm and CEO visibility will negatively impact the effect of spread on option repricing. Neither sales nor CEO cash compensation are significant in this model. However, the moderating effect of total cash compensation is negative and significant in the saturated model. In addition, Table 2 indicates that sales and CEO cash compensation are correlated at .75, thus collinearity may be masking potentially significant results. When total cash compensation was not included in models 4 and 5, the moderating effect of sales was negative and significant at p<.05, as predicted in Hypothesis 5. Similar results were found for total cash compensation when sales was excluded from the saturated model, although the moderating effect of compensation was still not significant in model 4. Hypothesis 5 is thus at least partially supported.

**DISCUSSION**

In this study we have begun to explore how CEO and stakeholder power impact organizational actions that can have potentially negative consequences for a firm. Our findings provide the opportunity to extend theories in executive compensation beyond the traditional agency theory framework (Barkema & Gomez-Mejia, 1998), and provide some insights into an important phenomena that so far has not received much attention in the management literature.
Our findings support the perhaps unsurprising contention that the degree to which a CEO’s stock options are underwater is a primary driver of the decision whether or not to reprice. Of more interest is the fact that a number of political factors interact with this primary driver to enhance or retard its effect on repricing. Consistent with previous research on CEO power, having a CEO who is also the Chairman of the Board enhances the probability that stock options will be repriced. An interesting and unexpected finding was that having more board members appointed by the CEO and having staggered board elections reduced the impact of spread on the likelihood of repricing. An important distinction between these measures and CEO duality is that, whereas holding both the CEO and COB positions directly enhances CEO power, the board capturing and staggered board measures enhance the power of the CEO indirectly by presumably decreasing the power of the board. It is possible that when considering relatively infrequent and visible actions that are likely to be interpreted negatively, such as deciding whether or not to reprice options, board members may be especially sensitive to taking actions that are interpreted as meeting the self-serving needs of the CEO, and thereby confirming assumptions about their weakness and lack of independence. Such a perception on the part of external stakeholders could diminish the legitimacy of claims made by the board regarding other issues. Thus, rather than enhancing CEO power, it is possible that these factors create impression management concerns for the board that may decrease CEO power in this instance.

Ownership power was found to reduce the effects of spread on repricing. The finding that the percentage of common stock owned by institutional investors had a negative moderating effect is consistent with previous research that suggests increasingly activist institutional shareholders can and do attempt to limit executive compensation (David, Kochhar, & Levitas, 1998; Useem, 1996). Also consistent with previous research (Murphy, 1998), CEO ownership
was negatively associated with repricing. It is possible that this finding results from the alignment of interests that comes with direct stock ownership. It is also possible that, in instances where the CEO owns a significant proportion of the company's stock, they become more risk averse (Sanders, 2001) and thus less willing to risk the potential consequences for the organization that stem from repricing. Table 2 reveals a negative correlation between CEO stock ownership and total amount at risk. Thus, CEOs with high levels of stock ownership may also be less concerned with repricing because it represents a smaller proportion of their total wealth. Finally, it may also be the case that those CEOs with substantial ownership stakes are less likely to leave the company because their options are underwater, and therefore the retention motivation purportedly underlying many repricing decisions is not as urgent.

This study provided some support for the expectation that the visibility of the firm and of its CEO would have a negative impact on repricing. If the visibility of the act and the resulting fallout were not a concern, then size would not have had a negative moderating effect. In fact, we might have expected to observe a positive interaction effect from CEO compensation, based on the argument that high compensation levels are an indicator of the CEO's ability to meet self-serving needs.

Our results have potentially significant implications for agency theory, which provides the logic for granting stock options, and are consistent with the arguments of others (e.g., Murphy, 1998) who have suggested that stock options are ineffective in aligning management and shareholder interests. Our findings show that powerful CEOs have a greater ability to change the strike price of their options, thereby removing the downside threat faced by stockholders. However, our results also support the contention that direct CEO ownership, even though it increases CEO power, also limits self-serving behavior. It is possible that alignment can be
achieved with relatively small percentage CEO ownership stakes, as long as the holdings represent a significant portion of the CEO's total wealth. One implication of this study for practitioners, then, is that restricted stock awards, which increase direct CEO ownership but prevent the CEO from selling the stock for a period of time, rather than stock options, may be a superior tool in achieving incentive alignment. Future research might continue to explore this issue. Finally, our findings support recent work (e.g., Wiseman & Gomez-Mejia, 1998) that suggests all managers are not uniformly risk averse, as traditionally assumed by agency theory. Rather, contextual factors can influence management perceptions of, and willingness to tolerate, risk. Future research should continue to explore this issue in other contexts besides compensation, such as strategic decision making.

As with any study, this one is not without its limitations. In this study we focused on a single industry in which stock options are considered an especially important part of the compensation package (Carter & Lynch, 2001). While such a focus provides a number of benefits, it also limits the generalizability of our findings. In addition, we have restricted the time frame of our study to a six-month period that experienced extreme market volatility. It is possible a different pattern of results could emerge if repricing events were examined over a longer period of time. However, 11.5% of the companies in our sample repriced within a six-month period, providing us with the necessary conditions to identify and capture the effects of forces that may have been more difficult to identify statistically in a longer and less turbulent period. (e.g., Brenner et al. [2000] found only 1.3% of the companies in their sample repriced in a given year). A final limitation is that we focused only on CEO option repricing. We were unable to determine whether or not employees beyond the five highest paid individuals also had their options repriced. However, whenever a CEO's options were repriced in our sample, at least some if not
all of the other top executives also had options repriced. It is unlikely that substantially different forces were at play when the board decided to reprice their options, although it is possible that different forces might be at play when a CEO's options are excluded from the repricing event. Future research might explore this question.

Additional research could also take a more in-depth look at serial repricers, companies that repeatedly reprice option grants for executives (Byrne, 1998). Although previous research has noted the presence of serial repricers (e.g., Brenner et al., 2000), no analyses have been conducted that explore how these firms differ from those that reprice only once or not at all. Future research might also examine companies' claims that repricing is necessary to retain key individuals by exploring the effects of repricing on executive turnover, as well as explore other organizational ramifications associated with repricing, including long term stock price performance.
REFERENCES


TABLE 1
Characteristics of Repriced Options

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Minimum</th>
<th>Maximum</th>
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<td>% Change in Stock (Prior to repricing)¹</td>
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<td>% Change in NASDAQ (Prior to Repricing) ¹</td>
<td>2.2%</td>
<td>-0.4%</td>
<td>6.5%</td>
<td>-7.8%</td>
<td>13.4%</td>
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<tr>
<td>% Change in Total Value of Options¹</td>
<td>-63.3%</td>
<td>-35.1%</td>
<td>42.4%</td>
<td>0%</td>
<td>-100%</td>
</tr>
<tr>
<td>% Change in Strike Price (At Repricing)²</td>
<td>-49.9%</td>
<td>-47.2%</td>
<td>16.6%</td>
<td>-24.8%</td>
<td>-84.3%</td>
</tr>
</tbody>
</table>

With Repricing:
% of CEO's at or in the Money, End of '98³ 71%
% of CEO's at or in the Money, End of '99⁴ 79%
Value of Repriced Options, End of '98 $ 942,737 $ 59,175 $2,157,342 $ 0 $ 8,643,900
Value of Repriced Options, End of '99 $ 3,133,799 $ 1,065,124 $3,615,221 $ 0 $ 10,575,000

Without Repricing:
% of CEO's at or in the Money, End of '98³ 18%
% of CEO's at or in the Money, End of '99⁴ 64%
Value of Repriced Options, End of '98 $ 388,400 $ 0 $1,457,803 $ 0 $ 6,206,400
Value of Repriced Options, End of '99 $ 2,166,995 $ 845,403 $2,925,609 $ 0 $ 8,137,500

¹Percentage Changes relative to June 1, 1998
²Compared to strike at time of grant or prior repricing. Underwater options valued at zero.
³Based on 17 CEOs
⁴Based on 14 CEOs; 3 firms were acquired or went bankrupt in 1999
TABLE 2
Descriptive Statistics and Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>s.d.</th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
<tr>
<td>1. Repricing Event</td>
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<td>2. Negative Spread</td>
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<td>3. Market Performance</td>
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<tr>
<td>4. In Institutional Ownership</td>
<td>3.00</td>
<td>1.36</td>
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<td>-0.24</td>
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<td>5. CEO Ownership</td>
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<td>6. Duality</td>
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<td>-0.05</td>
<td>0.01</td>
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<td>7. Board Members after CEO</td>
<td>2.90</td>
<td>2.10</td>
<td>-0.09</td>
<td>-0.25</td>
<td>0.00</td>
<td>0.14</td>
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<td>8. Staggered Board</td>
<td>0.51</td>
<td>0.50</td>
<td>-0.02</td>
<td>0.03</td>
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<td>0.11</td>
<td>0.07</td>
<td>0.15</td>
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<td>9. In Sales</td>
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<td>1.53</td>
<td>-0.01</td>
<td>-0.30</td>
<td>0.00</td>
<td>0.49</td>
<td>-0.16</td>
<td>0.11</td>
<td>0.17</td>
<td>0.02</td>
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<td>10. In Cash Compensation</td>
<td>12.74</td>
<td>0.66</td>
<td>-0.25</td>
<td>0.00</td>
<td>0.32</td>
<td>-0.14</td>
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<td>11. In Amount at Risk</td>
<td>12.16</td>
<td>5.59</td>
<td>-0.06</td>
<td>-0.49</td>
<td>0.00</td>
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<td>-0.08</td>
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<td>12. Board Size</td>
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<td>0.05</td>
<td>0.01</td>
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<td>0.51</td>
<td>0.13</td>
<td>0.21</td>
<td>0.29</td>
<td>0.03</td>
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</tbody>
</table>

Correlations greater than .12 are significant at $p<.001$; $r$'s greater than .08 are significant at $p<.01$; $r$'s>.07 are significant at $p<.05$. 
### TABLE 3
**Discrete Time Event History Analysis**

<table>
<thead>
<tr>
<th><strong>Explanatory Variable</strong></th>
<th><strong>Model 1</strong></th>
<th><strong>Model 2</strong></th>
<th><strong>Model 3</strong></th>
<th><strong>Model 4</strong></th>
<th><strong>Model 5</strong></th>
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<tbody>
<tr>
<td>Negative Spread</td>
<td>0.12 **</td>
<td>1.02 ***</td>
<td>0.19 **</td>
<td>0.15</td>
<td>2.49 ***</td>
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<td></td>
<td>(0.04)</td>
<td>(0.30)</td>
<td>(0.06)</td>
<td>(0.47)</td>
<td>(0.59)</td>
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<tr>
<td>In Institutional Ownership</td>
<td>0.16</td>
<td>0.26</td>
<td>0.03</td>
<td>0.16</td>
<td>0.18</td>
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<tr>
<td></td>
<td>(0.27)</td>
<td>(0.31)</td>
<td>(0.06)</td>
<td>(0.28)</td>
<td>(0.33)</td>
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<tr>
<td>CEO Ownership</td>
<td>-0.04</td>
<td>-0.04</td>
<td>-0.06</td>
<td>-0.04</td>
<td>-0.03</td>
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<tr>
<td></td>
<td>(0.05)</td>
<td>(0.04)</td>
<td>(0.06)</td>
<td>(0.05)</td>
<td>(0.05)</td>
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<tr>
<td>CEO Duality</td>
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<td>-0.60</td>
<td>-0.70</td>
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<td>(0.67)</td>
<td>(0.63)</td>
<td>(0.71)</td>
<td>(0.82)</td>
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<td>Board Members After CEO</td>
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<td>-0.15</td>
<td>-0.23</td>
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<td>(0.16)</td>
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<td>(0.18)</td>
<td>(0.16)</td>
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<tr>
<td>Staggered Board</td>
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<td>In Sales</td>
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<td>In Cash Compensation</td>
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<td>(0.17)</td>
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<td>(0.18)</td>
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<td>Institutional Ownership X Spread</td>
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</table>

*p<.10  *p<.05  **p<.01  ***p<.001