Directors' and officers' liability insurance pricing and corporate governance

Ning Wang
Valdosta State University

ABSTRACT

Directors' and officers' (D&O) liability insurance transfers a corporation's litigation risk and compensates managers for the loss arising from lawsuits against mismanagement. Prior literature indicates that good corporate governance acts to mitigate litigation risk. This paper explores whether the likelihood of litigations associated with corporate governance is imbedded in D&O insurance pricing. The results show that the D&O insurance price varies significantly with the quality of corporate governance, especially with CEO's management alignment. It is implied that insurers have insights into a corporation's litigation risk by largely considering its corporate governance and set the price accordingly. The findings support the corporate insurance theory, and provide updated evidence for the view that D&O insurance can strengthen monitoring by imposing good corporate governance features on the board to mitigate agency problem.

Keywords: Directors' and Officers' Liability Insurance, Corporate Governance, Litigation Risk, Firm Characteristics

INTRODUCTION

Directors' and officers' (D&O) liability insurance is purchased by a corporation to compensate directors and officers for the potential loss in case of lawsuits against their managerial actions. In 1992, 81% of U.S. corporations hold D&O insurance, and this number goes up to 93% in 1999. The purchase of D&O insurance also rises in Canada. The increasing popularity of D&O insurance amongst U.S. and Canadian corporations is attributed to the trend that both of the number of lawsuits against management and the amount of litigation settlements grow dramatically. According to Tillinghast-Towers Perrin, Inc. (1999), 64% of U.S. corporations whose assets are worth of more than 10 billion have to face litigations against managerial behavior from 1989 to 1999. Simmons and Ryan (2006) report that the total amount of U.S. securities class-action settlements increases from $4.9 billion in 2000 to $17.2 billion in 2006, and even excluding the top five settlements, the average 2006 settlement is more than twice of the average through 2005. As many corporations purchase D&O insurance, it is important to understand the relationship between D&O insurance pricing and litigation risk of the corporations.

The agency problem between shareholders and managers plays a dominating role in determining a corporation's D&O litigation risk. Imposing D&O liability and permitting shareholder suits can mitigate interest conflict and allow shareholders to recoup the loss arising from mismanagement. Tillinghast-Towers Perrin, Inc. (2002) discloses that more than half of the lawsuits against a corporation's directors and officers originate from shareholders. The probability of D&O litigations also appears to be related to other corporate managerial decisions. The report documents that the probability of D&O litigations in a corporation increases with a vigorous acquisition policy, resistance to take over attempts, and equity issues. It is thus indicated that the quality of corporate governance is important to assess a corporation's D&O litigation risk. Insurers have financial incentives to accurately price litigation risk associated with agency problems, so the corporate governance quality should be largely considered in the pricing of D&O insurance.

In literature, the role of D&O insurance in corporate governance is under debate. A strand of the literature supports the corporate insurance theory and proposes the insurer-monitoring hypothesis (Mayers and Smith, 1982; 1987; Bhagat et al., 1987; Baker and Griffith, 2007; 2010; Boyer and Tennyson, 2015). They suggest that insurers have financial incentives and comparative advantages in risk evaluation, and can act as outside assessors of litigation risk and recommend loss prevention and claims management programs. A good quality of corporate governance practices can be a condition for insurers to provide D&O insurance coverage. Therefore, D&O insurance motivates more aligned managerial actions and mitigate litigation risk through the underwriting and pricing process. The monitoring of corporate governance and the transferring of litigation risk through D&O insurance can enhance firm value. Another strand of the literature views D&O insurance as a replacement of internal litigation risk management mechanism and a shift of monitoring function to insurers so that D&O insurance encourages opportunistic behavior and aggressive accounting (Chalmers et al., 2002; Boyer, 2007; Ree et al., 2011; Lin et al., 2011; Gillan and Panasian, 2015). They suggest that D&O insurance may reflect opportunism by an entrenched board and benefit management at the expense of shareholders. This indicates that moral hazard is related to the D&O insurance purchase decision.

This paper investigates the corporate insurance theory by testing the relationship

between D&O insurance pricing and corporate governance on the recent data. To better measure the pricing of D&O insurance, this paper applies the unit price of insurance instead of the premium that was used in previous literature. If a good level of corporate governance is reflected by a more favorable D&O insurance price, it will be indicated that D&O insurance provides good managerial incentives and acts to mitigate litigation risk for the corporations. The results of this study show the D&O insurance price is negatively associated with the corporate governance level, especially with CEO's aligned behavior. The association suggests that insurers take the quality of corporate governance into account when assessing litigation risk, and offer more favorably priced D&O insurance coverage to the corporations with stronger governance quality. The findings provide updated evidence of the role of D&O insurance in monitoring the board and support the corporate insurance theory.

A review of literature is in the following section. The explanation of hypothesis and research methodology is followed in Section 3. The sample data is described in the next section. Section 5 provides regression results and analysis. Conclusion is stated at the end.

LITERATURE REVIEW

Mayers and Smith (1982; 1987) document that corporate insurance can lower the expected transaction costs of bankruptcy, provide real service efficiencies in claims administration, and monitor the compliance of contractual provisions. Bhagat et al. (1987) find that D&O insurance, exerting as a monitoring role, is beneficial for shareholders by mitigating the moral hazard problem. Bhagat et al. (1987) and Netter and Poulsen (1989) both report positive or zero wealth effects related to the news of corporations either purchasing D&O insurance or adopting indemnification provisions. Holderness (1990) argues that D&O insurance can be used to attract independent directors who are some of the best monitors of the officers in the corporation. Romano (1991) finds that the corporations change their governance structures in reaction to D&O litigation and concludes that insurers do not monitor enough. O'Sullivan (1997) examines a sample of UK firms and finds that D&O insurance can be used by large corporations as an incentive tool for managers to act in the interest of shareholders. In contrary, Chalmers et al. (2002) state that D&O insurance largely mitigates the potential litigation risk covered by insurers, making directors and officers take opportunistic behavior and be less aligned with shareholders. The study in Rees et al. (2011) also states that the D&O insurance purchase on the board's behalf can mitigate shareholder liability threats, and this may result in reduced board oversight of managers' activities and the financial condition of the corporation.

A handful of literature examines Canadian firms since the information about D&O insurance is public in Canada. Core (1997) discloses that the level of litigation risk and the cost of financial distress are the most important determinants of the D&O insurance demand. Core (2000) investigates the association between D&O insurance premium and governance quality, and demonstrates that D&O insurance premium contains useful information about the quality of corporate governance. Boyer (2007) presents that the Canadian firms are more likely to purchase D&O insurance when there are few outsiders on the board and when the board members have an important financial stake in the corporation. Lin et al. (2011) find the acquirers with D&O insurance have lower returns around the acquisition announcements.

The findings in Gillan and Panasian (2015) suggest that coverage and premium levels contain useful information about the lawsuit likelihood and a firm's governance quality. Boyer and Tennyson (2015) provide evidence for the view that the D&O insurance markets take corporate risk into account, and they conclude firms with stronger governance are more likely to purchase D&O insurance.

HYPOTHESIS AND METHODOLOGY

In literature, although D&O insurance premium and policy limit appear to be sensitive to a corporation's governance quality (Romano, 1991; Core, 2000; Gillan and Panasian, 2015; Boyer and Tennyson, 2015), it is still unclear whether corporate governance affects the D&O insurance price. This paper examines whether the likelihood of litigation associated with corporate governance is embedded in the D&O insurance price.

If the D&O insurance price significantly conveys information about corporate governance quality, it will be indicated that D&O insurance can produce aligned incentives and mitigate agency problem. On one hand, insurers who are responsible for litigation costs and claim payments have financial incentives to accurately evaluate a corporation's litigation risk, assess the probable payout obligations of each exposure, and charge an appropriate premium for the underwritten coverage accordingly (Mayers and Smith, 1982). Based on a survey of D&O insurance underwritings, Baker and Griffith (2007) report that insurers exert a high effort to select their potential clients. The report shows that individual characteristic of the managers is a crucial factor when insurers assess a corporation's litigation risk and insurers also consider other aspects of corporate governance. The report points out that insurers view good corporate governance quality as a sign of low litigation risk of the corporation. Increased interest alignment and improved governance quality can mitigate a corporation's litigation risk and thus reduce the need of monitoring by D&O insurance, so insurers tend to set a lower price in response to better governance quality of the corporation. On the other hand, to keep a good record of insurance claims and decline the cost of D&O insurance, the corporation intends to mitigate litigation risk and managers are motived to behave on behalf of shareholders. The hypothesis of this paper is thus developed: if the corporate insurance theory holds, when managers are protected under a D&O insurance policy, it is expected to observe stronger corporate governance with lower D&O insurance price as good corporate governance quality indicates low litigation risk.

Based on the hypothesis above, the initial empirical model for firm i is as follows,

$$\text{Price}_i = \beta_0 + \beta_1 \text{Deductible}_i + \beta_2 \text{Litigation Risk}_i + \varepsilon_i. \quad (1)$$

A corporation's litigation risk is a function of its corporate governance quality and business risk (Mayers and Smith, 1982; Core, 2000), so the model above can be updated as follows,

$$\text{Price}_i = \beta_0 + \beta_1 \text{Deductible}_i + \beta_2 \text{Corporate Governance Quality}_i + \beta_3 \text{Business Risk}_i + \varepsilon_i. \quad (2)$$

A necessary condition for the hypothesis is a complete D&O insurance market. Under symmetric information contracting, a corporation can select any policy limit and it is charged a premium based on the expected loss payment. Therefore, the price of a D&O insurance policy in this paper is the unit price that is defined as the premium per thousand dollars of policy limit. The natural logarithm of the unit price is denoted as Price. Deductible is defined

as the deductible amount per thousand dollars of policy limit, and its relationship to the D&O insurance price is predicted to be negative. If D&O insurance has a deductible, managers are more personally liable. Provided that good managers tend to signal their quality through a deductible under the screening theory, strong corporate governance increases the probability of a corporation holding D&O insurance with a deductible (Warning, 2010).

The variables of corporate governance that have been examined to impact litigation risk in prior literature are also employed in this study, and the focus is a corporation's ownership structure, board independence, and CEO management alignment. Prior works suggest that some firm characteristics can impact a corporation's litigation risk and thus the ownership of D&O insurance. This study also implements these firm characteristics as control variables to analyze the determinants of D&O insurance pricing. Thus the model can be present in more detail in Equation (3) as follows, denoted as Model I,

$$\begin{aligned}\text{Price}_i &= \beta_0 + \beta_1\text{Deductible}_i + (\beta_2\text{Inside\_own}_i + \beta_3\text{Blockholder}_i + \beta_4\text{Outside\_Board}_i \\ &+ \beta_5\text{CEO\_Chair}_i + \beta_6\text{CEO\_Year}_i + \beta_7\text{CEO\_Option}_i) + (\beta_8\text{Size}_i + \beta_9\text{ROE}_i \\ &+ \beta_{10}\text{Total\_Return}_i + \beta_{11}\text{Debt/Capital}_i) + \varepsilon_i. \end{aligned} \quad (3)$$

If the deductible amount is directly included in insurance pricing, the unit price will be the premium per thousand dollars of policy limit less any deductible amount, and its natural logarithm is denoted as Price_Ded. In this situation, Model I can be adjusted to Model II stated in Equation (4) as follows,

$$\begin{aligned}\text{Price\_Ded}_i &= a_0 + (b_1\text{Inside\_Own}_i + b_2\text{Blockholder}_i + b_3\text{Outside\_Board}_i \\ &+ b_4\text{CEO\_Chair}_i + b_5\text{CEO\_Year}_i + b_6\text{CEO\_Option}_i) + (b_7\text{Size}_i + b_8\text{ROE}_i \\ &+ b_9\text{Total\_Return}_i + b_{10}\text{Debt/Capital}_i) + e_i. \end{aligned} \quad (4)$$

Inside_Own is the percentage of voting shares controlled by inside directors. Literature provides a mixed theory of the effect of inside ownership on corporate governance. Agency theory posits that insiders holding more shares have more aligned incentives with shareholders, and thus the lawsuits from shareholders can be reduced in a corporation. Nevertheless, insider directors with more shares tend to be less exposed to the supervision of shareholders, and the corporation can be subject to entrenched management. Litigation risk should be large if shareholders cannot monitor inside directors well. So the predicted sign of inside ownership is ambiguous. Blockholder is the number of outside shareholders holding more than 10% voting right. Literature suggests that concentrated ownership by outside shareholders provides monitoring incentives and potentially mitigates the free-rider problem (Shleifer and Vishny, 1986). The corporations with large number of blockholders are more likely to face low litigation risk. The association between the D&O insurance price and blockholder ownership is predicted to be negative. Outside_Board is the ratio of outside directors on the board. A board with a large fraction of outsiders indicates high board independence and large monitoring effect of outsiders on the behavior of insiders (Holderness 1990; Yermack, 1996; O'Sullivan, 1997; Boyer and Tennyson, 2015). It is thus predicted that a lower D&O insurance price is related to a larger outside director ratio. CEO_Chair is a dummy variable equal to one if the CEO also serves as board chair, and zero otherwise. Prior studies have found that corporations with combined CEO and board chair positions have diminished performance, and separating these two positives is beneficial for large corporations (Yermack, 1996; Core, 1997; 2000; Gillan, Panasian, 2015). The coefficient of this dummy variable is expected to be positive. CEO_Year is the number of

years the CEO has served on the board. It is a proxy of management quality, and indicates the advantage of having an experienced CEO over having any entrenchment problems. The long experience of CEO serving on the board signals good managerial quality and low probability of litigations from shareholders (Core, 2000). The association of CEO experience with the D&O insurance price is thus predicted to be negative. CEO_Option is a dummy variable, describing CEO compensation in the form of stock options. Compensating CEO with incentive plans increases the CEO's interest alignment with shareholders so this variable is supposed to be negatively related to the D&O insurance price.

Size is the natural logarithm of total assets. Larger corporations are more likely to be diffuse, and their large scope of operations may result in more lawsuits and higher monitoring costs (Mayers and Smith, 1982). The increasing probability of agency problem in large firms aggravates litigation risk, and the risk of directors' and officers' negligence in managerial decisions also increases with firm size. So a positive sign of firm size to the D&O insurance price is predicted. Low return on equity (ROE) indicates weak firm performance as well as high business risk. Considering that D&O claims are often triggered by weak financial performance (Core, 1997), a negative sign is predicted for ROE in the test. Total_return is the three-year total return of a corporation's stock. The corporation with strong performance and low probability of business risk is more likely to observe a good return. Thus a negative sign is predicted for the total return. Debt/Capital is the ratio of total debt to total capital. Considering that a corporation with higher leverage faces larger litigation risk due to greater financial risk, D&O insurance should be more costly for higher-levered corporations (Mayers and Smith, 1982). However, the growth of the leverage can enhance the monitoring effect as the outside debtholders have incentives to actively monitor managerial actions, and the leverage growth can also prohibit the manager from abusing free cash (Boyer and Tennyson, 2015; Gillan and Panasian, 2015). In this case, D&O insurance should be cheaper for higher-levered corporations. Therefore, an ambiguous relationship between the leverage and the D&O insurance price is expected.

DATA DESCRIPTION

The data on D&O insurance such as policy limit, deductible and premium, and on corporate governance quality are collected by hand from the annual management information circular of Canadian firms in 2011 (see the website of SEDAR). This study focuses on the sector of industrial products that provides the main D&O insurance data in literature (Boyer and Tennyson, 2015). The data on other firm characteristics are collected from Compustat. Out of 93 firms that reported the purchase of D&O insurance in 2011, 69 firms are listed in Compustat. A subsample of 50 firms for the analysis of D&O insurance pricing is finally obtained by eliminating 19 firms for the following reasons: (1) D&O insurance is provided by the firm's parent; (2) premium or policy limit is not disclosed or disclosed for part of insurance coverage; (3) firm characteristics data is missing such as ROE in Compustat. Table 1 (Appendix) summarizes descriptive statistics of the sample data.

REGRESSION RESUTLS AND ANALYSIS

The OLS regression results of the two models developed in Equations (3) and (4) are reported in Table 2 (Appendix). These two linear models overall are statistically significant and show a strong relationship between litigation risk proxies and D&O insurance pricing. All the significant coefficient estimates of corporate governance quality and of business risk except the total return have the predicted signs in both models. In line with the hypothesis, the results illustrate that insurers charge the corporations with better governance quality at a lower price for D&O insurance.

Consistent with Baker and Griffith (2007), three proxies for CEO management alignment are all significant in both models. The D&O insurance price is declined with an increase in the number of years of CEO on the board, consistent with the view that the corporation with experienced CEO is more stable in operations and less risky in litigations. The D&O insurance price is also declined with an increase in the proxy for CEO incentive compensation, supportive of the incentive alignment effect. The corporation with the same CEO and board chair is subject to more costly D&O insurance. It is consistent with the hypothesis that insurers do not favor managerial entrenchment that acts to weaken corporate governance and increase litigation risk. The results of Model I also demonstrate that insurers charge less for D&O insurance when the corporation has a higher fraction of outside board, consistent with the prediction that insurers view more outside directors as a favorable feature due to their monitoring function. The test of this variable in Model II shows no significance, while the negative sign is consistent with the prediction. Additionally, the results in Model II show a negative and significant association between the number of blockholders and the D&O insurance price. It supports the hypothesis that insurers prefer the corporations with concentrated outside ownership due to the monitoring effect by blockholders. The test in Model I shows no significance on this variable, while the negative sign is the same as predicted. The lack of significance and the ambiguous sign on the coefficient estimates of inside ownership in two models indicate a mixed effect of incentive alignment and managerial opportunism by an entrenched board, as discussed before. Gillan and Panasian (2015) find inside ownership is unrelated to the D&O insurance premium. This study further suggests insurers do not price this aspect of ownership structure for D&O insurance.

In both models, firm size is statistically significant and positively related to the D&O insurance price, as predicted. The significant and negative coefficient estimates of ROE in both models demonstrate that D&O insurance is more expensive for the corporation with higher probability of business distress and litigation. The significant and negative coefficient estimate of leverage in Model II implies that the active monitoring effect of debtholders plays an essential role in pricing D&O insurance when financial risk is controlled. Although there is no significance on leverage in Model I, its sign is consistent with Model II. Contrary to the prediction, deductible is positively associated with the D&O insurance price. One possible explanation is that some corporations choose a large amount of deductible not to signal their governance quality but in order to acquire policy limit as high as possible within their budget. The screening hypothesis stated in Warning (2010) works for the ownership of deductible, but it does not hold for choosing the amount of deductible under policy limit. The positive coefficient estimate of total return is also contrary to the prediction in Model I. One interpretation is that a high total return may lead to a high level of litigation risk in fast-growing corporations since the managers are more willing to take more risky projects

(Mayers and Smith, 1982; Baker and Griffith, 2010; Boyer and Tennyson, 2015).

CONCLUSION

This paper uses a sample of Canadian firms and provides updated evidence on the factors of corporate governance and firm characteristics associated with D&O insurance pricing. Consistent with the literature (Mayers and Smith, 1982; 1987; Core 1997; 2000; Baker and Griffith, 2007; Boyer and Tennyson, 2015), this study shows that lower D&O insurance price is related to stronger corporate governance, and indicates that insurers have insights into a corporation's litigation risk by largely considering its governance quality and set the price accordingly. Among all the variables of corporate governance examined in this study, the variables regarding CEO's management alignment affect D&O insurance pricing most significantly. This study also suggests that insurers consider the outside board ratio and blockholder ownership in D&O insurance pricing, but they do not price inside ownership structure due to its dual role in corporate governance. The findings support the hypothesis that D&O insurance pricing conveys information about how corporate governance acts to mitigate litigation risk. It is consistent with the corporate insurance theory that insurers strengthen the monitoring by imposing favorable corporate governance features on the board as a precondition for D&O insurance.

Considering more strict litigation environment in the US than in Canada, the lawsuits against mismanagement can be more often and costly in the US and the purchase decision of D&O insurance should be more important for U.S. corporations. Insurers consider the factors that can best assess a corporation's litigation risk in the underwriting and pricing process, and this paper suggests the level of corporate governance is one among those factors. This paper also implies that firm's corporate governance quality is more likely to improve if D&O insurance information is disclosed in public in the US.

REFERENCES

Baker, T., and Griffith, S.J. (2007). Predicting Corporate Governance Risk: Evidence from the Directors' and Officers' Liability Insurance Market. *Chicago Law Review*, 74, 487-544.

Baker, T., and Griffith, S.J. (2010). Ensuring Corporate Misconduct, Chicago: University of Chicago Press.

Bhagt, S., Brickley, J.A. and Coles, J.L. (1987). Managerial Indemnification and Liability Insurance: The Effect on Shareholder Wealth. *Journal of risk and insurance*, 54, 721-736.

Black, B., Cheffins, B. and Klausner, M. (2005). Liability Risk for Outside Directors: A Cross-Border Analysis. *European Financial Management Journal*, 11, 153-171.

Boyer, M.M. (2007). Directors' and Officers' Insurance in Canada. *Corporate Ownership and Control*, 4, 141-145.

Boyer, M.M., and Tennyson, S. (2015). Directors' and Officers' Liability Insurance, Corporate Risk and Risk Taking: New Panel Data Evidence on the Role of Directors' and Officers' Liability Insurance. *Journal of Risk and Insurance*, 82, 753-791.

Chalmers, J.M., Dann, L. and Harford, J. (2002). Managerial Opportunism? Evidence from Directors' and Officers' Insurance Purchases. *Journal of Finance*, 57, 609-636.

Core, J.E. (1997). On the Corporate Demand for Directors' and Officers' Insurance. *Journal of Risk and Insurance*, 64, 63-87.

Core, J.E. (2000). The Directors' and Officers' Insurance Premium: An outside Assessment of the Quality of Corporate Governance. *Journal of Law, Economics and Organization*, 6, 449-477.

Gillan, S.L., and Panasian, C.A. (2015). On Lawsuits, Corporate Governance, and Directors' and Officers' Liability Insurance. *Journal of Risk and Insurance*, 82, 793-822.

Holderness G. (1990). Liability Insurers as Corporate Monitors. *International Review of Law and Economics*, 10, 115-129.

Lin, C., Officer M., and Zou, H. (2011). Directors' and Officers' Liability Insurance and Acquisition Outcomes. *Journal of Financial Economics*, 102, 507-525.

Mayers, D., and Smith, C.W. (1982). On the Corporate Demand for Insurance. *Journal of Business*, 55: 281-296.

Mayers, D., and Smith, C.W. (1987). Corporate Insurance and the Underinvestment Problem. *Journal of Risk and Insurance*, 54: 45-54.

Netter, J., and Poulsen, A. (1989). State Corporation Laws and Shareholders: The Recent Experience. *Financial Management*, 18, 29-40.

O'Sullivan N. (1997). Issuing the agents: the Role of Directors and Officers Insurance in Corporate Governance. *Journal of Risk and Insurance*, 64, 545-556.

Raheja C. (2005). Determinants of Board Size and Composition: A Theory of Corporate Boards. *Journal of Financial and Quantitative Analysis*, 40, 283-306.

Rees, R., Radulescu, D. and Egger, P. (2011). Corporate Governance and Managerial Incentives: Evidence From the Market for D&O Insurance. Working Paper, ETH Zurich.

Romano, R. (1991). The Shareholder Suit: Litigation Without Foundation? *Journal of Law, Economics, & Organization*, 7, 55-87.

Shleifer, A., and Vishny, R. (1997). A survey of Corporate Governance. *Journal of Finance*, 52, 737-783.

Simmons, L. E., and Ryan, E. M. (2006). Securities Class Action Settlements: 2006 Review and Analysis. Cornerstone Research.

Tillinghast-Towers Perrin, Inc. (1999). Directors and Officers Liability Survey: US and Canadian Results.

Tillinghast-Towers Perrin, Inc. (2002). Directors and Officers Liability Survey: US and Canadian Results.

Warning, S. (2010). D&O Insurance and Corporate Governance Quality – Some Empirical Evidence. Working Paper.

Yermack, D. (1996). Higher Market Valuation of Companies With a Small Board of Directors. *Journal of Financial Economics*, 40, 185-211.

APPENDIX

Table 1: Descriptive Statistics

Variables	Mean	S.D.	Max.	Min.
Price	1.5149	0.5971	2.8954	0.5501
Price_Ded	1.5193	0.5990	2.8954	0.5509
Deductible	4.3371	4.4598	20.0000	0.0000
Inside_Own	0.1903	0.2746	0.9286	0.0004
Blockholder	0.7400	0.9435	4.0000	0.0000
Outside_Board	0.7056	0.1022	0.8571	0.4000
CEO_Chair	0.3200	0.4712	1.0000	0.0000
CEO_Year	8.3600	9.7557	38.0000	0.0000
CEO_Option	0.8600	0.3505	1.0000	0.0000
Size	4.9696	1.8653	9.4627	1.6337
ROE	-6.9984	41.0704	188.5500	-93.3350
Total_Return	-2.5899	26.2692	67.9340	-62.9530
Debt/Capital	22.1920	36.0636	209.6930	0.0000

Table 2: Regression Results

	Model I: Regression of Price		Model II: Regression of Price_Ded	
Variables	Coefficient	Std. Error	Coefficient	Std. Error
Intercept	2.3703	0.6400	2.7106	0.7196
Deductible	0.0556 ***	0.0160		
Inside_Own	-0.0669	0.3422	0.0806	0.3863
Blockholder	-0.1368 *	0.0744	-0.1303	0.0846
Outside_Board	-1.2564	0.8199	-1.5819 *	0.9267
CEO_Chair	0.3812 **	0.1851	0.3598 *	0.2104
CEO_Year	-0.0291 ***	0.0107	-0.0292 **	0.0121
CEO_Option	-0.7523 ***	0.2660	-0.7509 **	0.3026
Size	0.1497 ***	0.0493	0.1744 ***	0.0555
ROE	-0.0047 **	0.0022	-0.0056 **	0.0025
Total_Return	0.0059 *	0.0032	0.0056	0.0037
Debt/Capital	-0.0040	0.0025	-0.0050 *	0.0029
R-Square	0.5029		0.3441	
Adj. R-Square	0.3590		0.1760	
Observation	50		50	

Note: *** denotes significance at 0.01 level, ** denotes significance at 0.05 level, and * denotes significance at 0.1 level.