**The influences of corporate governance on management’s opportunistic voluntary disclosure behavior before share repurchases**

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**Abstract**

We set out in this project to study the effect of corporate governance on the opportunistic management behavior in the pre-share repurchase voluntary disclosures. Prior literature has devoted considerable attention to the impact of governance structures on corporate behavior, such as earnings management and voluntarily disclosure. However, there is no existing literature investigating whether the monitoring effect of corporate governance can diminish managers’ opportunistic behavior on manipulating stock prices through voluntary disclosures before share repurchases. We examine the effect of three governance variables that are widely used in the literature: institutional ownership, board independence, and analyst coverage. We find that better corporate governance quality lowers the managerial opportunism before repurchasing shares. This is an important issue that has not been studied in the literature and our study shed light on the effect of corporate governance structure on the management voluntary disclosure decision and quality.

Key Words: Acquisitions; Payment method; Timing strategy; Corporate Governance; Share Repurchases; Voluntary Disclosure

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# 1. Introduction

We set out in this project to study the effect of corporate governance on the opportunistic management behavior in the pre-share repurchase voluntary disclosures. Prior literature has devoted considerable attention to the impact of governance structures on corporate behavior, such as earnings management and voluntarily disclosure. These studies document that corporate governance variables, such as institutional ownership of the firm, board of director characteristics, and analyst coverage, can mitigate earnings management and enhance the quality of financial disclosure (Klein, 2002; Ajinkya, Bhojraj, and Sengupta, 2005; Karamanou and Vafeas, 2005; Cornett, Marcus, Tehranian, 2008; Yu, 2008). Therefore, managers’ self-interested or opportunistic behavior seems to be discouraged by these governance mechanisms. However, previous studies indicate that managers manipulate stock prices through voluntary disclosures (Frankel, McNichols, and Wilson, 1995; Yermack, 1997; Aboody and Kasznik, 2000; Lang and Lundholm, 2000; Cheng and Lo, 2006; Brockman, Khurana, and Martin, 2008), but there is no existing literature investigating whether the monitoring effect of corporate governance can diminish this management opportunistic behavior.

Stock repurchases are a remarkably important corporate payout policy. Several studies indicate that managers are likely to have private incentives to deflate the repurchase price in order to effectively transfer wealth from the shareholders who sell their stock to the remaining shareholders who choose not to sell (Barclay and Smith, 1988; Gong, Louis, and Sun, 2008; Brockman, Khurana, and Martin, 2008). Managers can benefit from this wealth transfer because their interests are more likely to be aligned with those of the remaining shareholders through their equity stakes in the firm, career concerns, and their future compensation. Brockman, Khurana, and Martin (2008) find supportive evidence that managers actively manipulate voluntary disclosures before share repurchases. During the one month period prior to repurchasing shares, managers increase the frequency and magnitude of bad news announcements and provide downward-biased earnings forecasts.

Although the results of Brockman, Khurana, and Martin (2008) are insightful, they do not consider the governance mechanisms on the effect of share repurchase voluntary disclosures. In this chapter, we examine whether governance mechanisms can restrain managers’ opportunistic behavior in response to share repurchases. We mainly focus on three governance variables－institutional ownership, board independence, and analyst coverage－because these are widely used to study the impact of governance structures on management behavior about earnings management and voluntary disclosure practice in the literature. We find that governance mechanisms can mitigate managers to affect stock prices by using voluntary disclosures prior to repurchases.

The remainder of this chapter is organized as follows: In Section 2.2, we review prior literature and develop our hypotheses. Section 2.3 contains the data and methodology, and Section 2.4 reports empirical results. In Section 2.5, we summarize our main results.

# 2. Literature review and hypothesis development

## *2.1. Institutional ownership*

McConnell and Servaes (1990), Smith (1996), Del Guercio and Hawkins (1999), and Hartzell and Starks (2003) find that institutional investors can constrain managers’ behavior. Moreover, Cornett, Marcus, Tehranian (2008) show institutional ownership is associated with lower use of discretionary accruals, while Ajinkya, Bhojraj, and Sengupta (2005) and Karamanou and Vafeas (2005) find higher institutional ownership is associated with more frequent, specific, accurate, and less biased earnings forecasts. Institutional investors have the opportunity, resources, and ability to monitor, discipline, and influence managers. Hence, we argue that the monitoring effect by institutions can force managers to focus more on corporate performance and less on opportunistic behavior.

Besides, disclosures, such as earnings forecasts, are also closely watched by institutional investors because they consistently probe the company for more specific, unbiased, and accurate information by listening to conference calls. Institution investors are thus likely to be well suited to monitor managers because they usually have better information about the firm and then can deter managers from behaving opportunistically. Also, they usually have higher equity investment in the firm, inducing them to have a stronger incentive to monitor management, unlike small shareholders who are frequently free riders because of insufficient information and incentives. As a result, managers should be more difficult to alter the content of information flows by providing overly pessimistic forecasts before upcoming repurchases because of the monitoring effect by institution investors.

## *2.2. Analyst coverage*

Extant literature suggests that a high level of analyst coverage leads firms to a better information environment and less asymmetric information (Bushman and Smith, 2001; Healy and Palepu, 2001). Healy and Palepu (2001) suggest that analysts help to detect management’s misbehavior because they engage in private information production. Dyck, Morse, and Zingales (2006) document that analysts play an active role in corporate fraud detection. Recently, Yu (2008) further indicates that analysts serve as external monitors to managers and deter their opportunistic earnings management. Analysts often interact directly with management and raise questions on different aspects of a firm’s financial reporting during earnings release conference calls. Executives who make decisions have to face and answer those questions.

Analysts can also express their concerns about covered firms through their research reports to their clients, through recommendations and forecasts to general investors, and through their appearance in public media such as newspapers and TV programs to an even boarder audience. With training in finance and substantial industry background knowledge, analysts track firms on a regular basis, continuously inspecting management behavior and financial reporting irregularities. Therefore, we expect that with higher monitoring intensity of analysts, management is less likely to engage in opportunistic disclosure behavior before repurchasing shares.

## *2.3. Outside directors*

Prior empirical work also finds that outside directors who are independent of management have favorable effect on firms’ decisions to enhance shareholder value or to protect shareholder interests against managerial opportunism. Dechow, Sloan, and Sweeney (1995) and Beasley (1996) document a negative link between outside directors and the occurrence of financial fraud. Klein (2002) finds outside directors are negatively related to earnings manipulation. Ajinkya, Bhojraj, and Sengupta (2005) and Karamanou and Vafeas (2005) report that firms with more outside directors have better financial disclosure quality. Outside directors directly review the disclosure policy and earnings releases as well as foster an environment that encourages greater transparency, so they can mitigate managerial self-serving behavior and influence the issuance and properties of forecast disclosures. Therefore, board dominated by outsiders should be in a better position to monitor and control managers because they are effective monitors of managerial actions. Higher proportion of outside directors is thus expected to lower the managerial opportunism before repurchasing shares.

# 3. Sample selection and methodology

## *3.1. Sample*

We retrieve data on share repurchases, management forecasts, firm characteristics, and stock returns from the Security Data Corporation (SDC) Merger and Acquisition, First Call, Compustat, and the Center for Research in Security Prices (CRSP) databases, respectively. Corporate governance measures are obtained from Thomson Reuters (institutional ownership), IRRC (board independence), and I/B/E/S (analyst coverage). Our sample period is from January 1997 to December 2008 because of the data availability. Following Brockman, Khurana, and Martin (2008), we include all management forecasts, whether they are for earnings or not, and whether the forecasts are for quarterly or annual periods. Moreover, we treat multiple forecasts by the same firm on the same day (e.g., an earnings forecast for next quarter and for next year) as a single forecast event.

We use abnormal announcement returns around the management forecasts, which is calculated as the stock returns of the three-day window [-1, 1] around management forecasts minus the CRSP value-weighted index returns for the same period, to distinguish bad news forecasts and good news forecasts. If the abnormal return is negative (non-negative), we classify the forecast as bad news (good news). Similar to Brockman, Khurana, and Martin (2008), we compare management forecasts issued within a 30-day window prior to the beginning of share repurchases relative to all other management forecasts issued by our sample firms over the 1997-2008 sample period.

Table 1 provides sample size for our full sample. We identify 735 management forecasts that are issued within 30 days prior to share repurchase programs by 519 unique firms. For this set of 519 unique firms, we identify 13,870 management forecasts issued during the 1997-2008 period that do not fall within 30 days prior to share repurchases. Therefore, we have a total of 14,605 management forecasts out of which 6,919 (7,686) are classified as bad (good) news.

**[Insert Table 1 here]**

## *3.2. Methodology*

We estimate two models that use two related dependent variables to examine if corporate governance can restrain management opportunistic behavior before share repurchases. The first dependent variable (BN) is an indicator variable that is equal to one if the management forecast is classified as bad news and zero otherwise. The second dependent variable (AR) is the abnormal return over the 3-day window [-1, 1] around management forecasts. Specifically, we estimate the following models:

where *DisclosureRep* is a dummy variable that equals one if a management forecast falls within the event window (30 days prior to the beginning date of the share repurchase), and zero otherwise. *GOV* is corporate governance quality measures including institutional ownership percentage, number of analyst following, and outside director percentage of the management forecast firm.

*Controls* are firm level control variables that comprise log market value, market-to-book ratio, litigation industry, return on equity, loss, earnings volatility, prior cumulative abnormal returns, and stock compensation of CEO. The accounting data is based on the fiscal year preceding the date of the management forecast. Litigation industry is a dummy variable that equals one if a firm is in the biotechnology (2833-2836 and 8731-8734), computers (3570-3577 and 7370-7374), electronics (3600-3674), and retail (5200-5961) industries, and zero otherwise. Loss is a dummy variable that equals one if the firm reported losses in the current period, and zeor otherwise. Earnings volatility is the standard deviation of quarterly earnings over 12 quarters ending in the fiscal year before management forecast, divided by median asset value over the 12 quarters. Prior cumulative abnormal returns is cumulative abnormal returns computed as the excess firm return over the CRSP value-weighted index during the three months ending 2 days before the issuance of a management forecast. Stock compensation of CEO is the sum of the value of CEO stock options (as valued by the Black-Scholes option pricing model), the value of CEO restricted stocks, and the value of stock held by the CEO, all scaled by the firm’s market value. We obtain management compensation data from the Execucomp-Compustat database.

We use logistic regressions clustered by year and industry (based on two-digit SIC codes) to estimate model (1) and ordinary least squares (OLS) clustered by year and industry to estimate model (2).

# 4. Empirical results

## *4.1. Descriptive statistics*

Table 2 shows the descriptive statistics of the variables used for our sample. Approximately 5% of management forecasts are issued within the 30 days preceding the beginning of repurchasing shares, which implies that about 95% of management forecasts are outside the event window. The average abnormal return around management forecasts is -0.4%. These abnormal returns vary from -3.5% for the lower quartile to 3.8% for the upper quartile. The average abnormal return for bad news forecasts is -6%, while that for good news forecasts is 4.6%. These results are similar to those in Brockman, Khurana, and Martin (2008). Further, our sample averagely has 76.9% institutional holdings, 9.7 analysts, and 70% independent directors.

**[Insert Table 2 here]**

## *4.2. Univariate results*

In Table 3, we compare the probability of bad news and 3-day abnormal announcement returns for the management forecasts fall within and outside the share repurchase event window. The probability of bad news is greater for management forecasts issued 30 days prior to the beginning of a share repurchase than it is for management forecasts issued outside the event window (53.06% versus 47.07%) at the 1% significance level. The difference in the mean (median) abnormal return around the issuance of management forecasts between the two subsamples is 1.34% (1.05%), statistically significant at the 1% level. These results confirm the findings in Brockman, Khurana, and Martin (2008) that managers increase the frequency and magnitude of bad news disclosures during the one month period prior to share repurchases.

**[Insert Table 3 here]**

In order to examine the influences of corporate governance on managers’ opportunistic behavior, we then classify management forecasts issued within and outside the repurchase event window into three groups by institutional ownership, analyst coverage, and outside directors, respectively. Management forecasts with the highest (middle/lowest) one third corporate governance variable are classified as “High” (“Middle”/“Low”) group. Panel A, B, and C of Table 4 reports the influences of institutional ownership, analyst coverage, and outside directors, respectively.

**[Insert Table 4 here]**

According to Panel A of Table 4, institutional holdings do not have influences on the managers’ opportunistic behavior because management still releases relatively more bad news, both in terms of frequency and magnitudes before repurchasing shares for the “Middle” and “High” group. However, from Panel B and C of Table 4, the significant difference of the probability of bad news and abnormal returns between management forecasts within and outside the event window disappears for the “High” group, illustrating that analyst coverage and independent directors can constrain managers to alter the normal content of disclosures before repurchases. Moreover, independent directors seem to have better governance effect because the significant differences of the probability of bad news and abnormal returns vanish for the “Middle” group.

## *4.3. Multivariate results*

Table 5 presents regression results for the full sample to test if corporate governance variables still have monitoring effect after controlling for other firm characteristics that potentially affect management forecast news. Panel A of Table 5 reports logistic regression results based on model (1). Without considering governance mechanisms in column 1, the coefficient of DisclosureRep is positively and statistically significant at the 5% level shows that managers strategically increase the frequency of bad news prior to a share repurchase.

**[Insert Table 5 here]**

In column 2, the coefficient of the interaction term between institutional ownership percentage and DisclosureRep is insignificant suggests that institution investors has no influence on the probability of bad news for management forecasts within the event window. However, coefficients of the interaction term between number of analyst following and DisclosureRep and between outside director percentage and DisclosureRep are negatively and statistically significant at 5% level or better. More importantly, the coefficient of DisclosureRep becomes insignificant when taking corporate governance variables into account. These results show that analyst coverage and outside directors can limit managers to alter information flows prior to share repurchases.

Panel B of Table 5 reports OLS regression results based on model (2). The coefficients on DisclosureRep and interaction terms between corporate governance variables and DisclosureRep have the similar effect and levels of statistical significance as those in Panel A. That is, analyst coverage and independent directors can restrain managers to provide overly pessimistic bad news disclosures before upcoming repurchases, while institutional holdings do not have any governance effect. Taken together, the results in Panel A and B of Table 5 corroborate the results at the univariate level reported in Table 4, suggesting our findings are robust after controlling for other factors that potentially affect management forecast news.

# 5. Conclusion

In this chapter, we examine the effect of corporate governance structure on the management voluntary disclosure decision before repurchasing shares. We find that analyst coverage and independent directors can restrain managers manipulate stock price by voluntarily disclosing bad news before upcoming repurchases, while institutional holdings do not have any governance effect. Therefore, opportunistic behavior of management as suggested in Brockman, Khurana, and Martin (2008) does not necessarily exist when taking corporate governance effect into account.

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**Table 1 Sample Size**

This table describes the sample size of management forecasts during the period from 1997 to 2008. The repurchase event window refers to the 30 days prior to the date a share repurchase begins. A management forecast is classified as bad news (good news) if the abnormal return, computed as the excess firm return over the CRSP value-weighted index over the 3-day window [-1, 1] around management forecasts, is negative (non-negative).

|  |  |
| --- | --- |
|  | Sample size |
| Number of management forecasts falling within the event window | 735 |
| Number of unique firms | 519 |
| Number of management forecasts issued by unique firms that do not fall within the event window | 13,870 |
| Total number of management forecasts in the sample | 14,605 |
| Number of bad news forecasts | 6,919 |
| Number of good news forecasts | 7,686 |

**Table 2 Summary Statistics**

This table provides summary statistics for the 14,605 management forecast sample during the period from 1997 to 2008.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variable | N | Mean | Std dev | Lower quartile | Median | Upper quartile |
| DisclosureRep | 14,605 | 0.050 | 0.219 | 0.000 | 0.000 | 0.000 |
| Abnormal returns | 14,605 | -0.004 | 0.075 | -0.035 | 0.003 | 0.038 |
| Bad news | 6,919 | -0.060 | 0.065 | -0.079 | -0.038 | -0.018 |
| Good news | 7,686 | 0.046 | 0.039 | 0.015 | 0.036 | 0.069 |
| Institutional ownership percentage | 14,605 | 0.769 | 0.180 | 0.652 | 0.785 | 0.882 |
| Number of analyst following | 14,605 | 9.704 | 7.734 | 4.000 | 9.000 | 15.000 |
| Outside director percentage | 14,605 | 0.700 | 0.159 | 0.600 | 0.714 | 0.833 |
| Market value ($bil) | 14,605 | 15.240 | 1.580 | 14.072 | 15.128 | 16.274 |
| Market-to-book ratio | 14,605 | 4.772 | 20.839 | 1.871 | 2.872 | 4.365 |
| Litigation industry | 14,605 | 0.425 | 0.494 | 0.000 | 0.000 | 1.000 |
| Return on equity | 14,605 | 0.218 | 1.361 | 0.096 | 0.148 | 0.211 |
| Loss | 14,605 | 0.070 | 0.255 | 0.000 | 0.000 | 0.000 |
| Earnings volatility | 14,605 | 0.285 | 0.616 | 0.294 | 0.097 | 0.029 |
| Prior cumulative abnormal returns | 14,605 | 0.010 | 0.177 | -0.080 | 0.011 | 0.105 |
| Stock compensation of CEO | 14,605 | 0.154 | 0.477 | 0.010 | 0.029 | 0.087 |

**Table 3 Univariate Analysis-Full Sample**

This table presents univariate results for testing the difference in the probability of bad news and abnormal returns between management forecasts that fall in the repurchase event window versus those that fall outside the event window.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables | | Within | Outside | Difference | *t*-value |
| Prob(BN) | Mean | 0.5306 | 0.4707 | 0.0599\*\*\* | 3.17 |
|  |  |  |  |  |  |
| AR | Mean | -0.0167 | -0.0033 | -0.0134\*\*\* | 4.36 |
|  | Median | -0.0071 | 0.0033 | -0.0105\*\*\* | 4.74 |
| N |  | 735 | 13,870 |  |  |

**Table 4 Univariate Analysis-Corporate Governance Effect**

This table examines the influences of corporate governance on the difference of probability of bad news and abnormal returns between management forecasts that fall in the repurchase event window versus those that fall outside the event window. Management forecasts issued within and outside the repurchase event window are classified into three groups by institutional ownership, analyst coverage, and outside directors in Panel A, B and C, respectively. Management forecasts with the highest (middle/lowest) one third corporate governance variable are classified as “High” (“Middle”/“Low”) group. Differences in means and medians are assessed using *t*-tests and Wilcoxon rank-sum tests. \*\* and \*\*\* represent the 5% and 1% significance levels, respectively.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | | Low | | | |  | Middle | | | |  | High | | | |
|  | | Within | Outside | Diff | *t*-value |  | Within | Outside | Diff | *t*-value |  | Within | Outside | Diff | *t*-value |
| *Panel A: Institutional Ownership Percentage* | | | | | | | | | | | | | | | |
| Prob(BN) | Mean | 0.5061 | 0.4774 | **0.0287** | 0.88 |  | 0.5429 | 0.4693 | **0.0735\*\*** | 2.25 |  | 0.5429 | 0.4655 | **0.0774\*\*** | 2.37 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AR | Mean | -0.0141 | -0.0061 | **-0.0080** | 1.61 |  | -0.0160 | -0.0018 | **-0.0142\*\*\*** | 3.04 |  | -0.0200 | -0.0021 | **-0.0179\*\*\*** | 3.05 |
|  | Median | -0.0003 | 0.0024 | **-0.0027** | 1.64 |  | -0.0088 | 0.0033 | **-0.0122\*\*\*** | 3.39 |  | -0.0095 | 0.0045 | **-0.0141\*\*\*** | 3.18 |
| N |  | 245 | 4,619 |  |  |  | 245 | 4,632 |  |  |  | 245 | 4,619 |  |  |
| *Panel B: Number of Analyst Following* | | | | | | | | | | | | | | | |
| Prob(BN) | Mean | 0.5338 | 0.4473 | **0.0865\*\*\*** | 2.76 |  | 0.5872 | 0.4934 | **0.0938\*\*\*** | 2.70 |  | 0.4781 | 0.4748 | **0.0032** | 0.10 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AR | Mean | -0.0222 | 0.0025 | **-0.0247\*\*\*** | 4.40 |  | -0.0191 | -0.0079 | **-0.0112\*\*** | 1.99 |  | -0.0088 | -0.0052 | **-0.0036** | 0.77 |
|  | Median | -0.0076 | 0.0062 | **-0.0139\*\*\*** | 4.23 |  | -0.0132 | 0.0007 | **-0.0139\*\*\*** | 2.88 |  | 0.0032 | 0.0029 | **0.0003** | 1.04 |
| N |  | 266 | 4,775 |  |  |  | 218 | 4,007 |  |  |  | 251 | 5,088 |  |  |
| *Panel C: Outside Director Percentage* | | | | | | | | | | | | | | | |
| Prob(BN) | Mean | 0.5956 | 0.4654 | **0.1302\*\*\*** | 3.82 |  | 0.5075 | 0.4755 | **0.0320** | 1.02 |  | 0.4959 | 0.4705 | **0.0254** | 0.77 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AR | Mean | -0.0328 | -0.0044 | **-0.0283\*\*\*** | 4.85 |  | -0.0084 | -0.0023 | **-0.0061** | 1.19 |  | -0.0109 | -0.0034 | **-0.0075** | 1.61 |
|  | Median | -0.0178 | 0.0045 | **-0.0223\*\*\*** | 5.43 |  | -0.0010 | 0.0027 | **-0.0037** | 1.32 |  | 0.0005 | 0.0032 | **-0.0027** | 1.58 |
| N |  | 225 | 4,564 |  |  |  | 266 | 5,289 |  |  |  | 244 | 4,017 |  |  |

**Table 5 Regression Results**

This table reports the regression results of estimating the relation among the repurchase event, corporate governance variables, and disclosure of bad news. Panel A presents logistic regression results clustered by industry and year using the dependent variable, BN, a dummy variable that equals one if the management forecast is classified as bad news and zero otherwise. Panel B presents ordinary least squares regression results clustered by industry and year using the dependent variable, AR, the abnormal return over the 3-day window [-1, 1] around management forecasts. \*, \*\*, and \*\*\* represent the 10%, 5%, and 1% significance levels, respectively.

|  |  |  |
| --- | --- | --- |
| Variables | Parameter estimate | |
| *Panel A: Prob(BN) as Dependent Variable* | | |
| Intercept | 0.0014 | 0.2621 |
|  | (0.01) | (1.17) |
| **DisclosureRep** | **0.2114\*\*** | **0.8656** |
|  | **(2.03)** | **(1.58)** |
| Institutional ownership percentage |  | -0.1144 |
|  |  | (0.91) |
| **Institutional ownership percentage\*DisclosureRep** |  | **0.5384** |
|  |  | **(1.24)** |
| Number of analyst following |  | 0.0093\*\*\* |
|  |  | (4.42) |
| **Number of analyst following\* DisclosureRep** |  | **-0.0119\*\*** |
|  |  | **(2.13)** |
| Outside director percentage |  | 0.1534 |
|  |  | (1.31) |
| **Outside director percentage\* DisclosureRep** |  | **-1.3382\*\*\*** |
|  |  | **(3.94)** |
| Log market value | -0.0095 | -0.0331\*\*\* |
|  | (0.89) | (2.68) |
| Market-to-book ratio | -0.0008 | -0.0008 |
|  | (0.40) | (0.36) |
| Litigation industry | 0.0060 | -0.0164 |
|  | (0.16) | (0.41) |
| Return on equity | 0.0084 | 0.0097 |
|  | (0.29) | (0.28) |
| Loss | -0.0082 | -0.0227 |
|  | (0.13) | (0.46) |
| Earnings volatility | 58.0022\*\* | 56.3990\* |
|  | (2.06) | (1.83) |
| Prior cumulative abnormal returns | -0.0491 | -0.0398 |
|  | (0.31) | (0.27) |
| Stock compensation of CEO | 0.0702\* | 0.0718\*\* |
|  | (1.85) | (2.01) |
| Stock compensation of CEO\*DisclosureRep | 0.1754 | 0.0369 |
|  | (0.79) | (0.18) |
|  |  |  |
| N | 14,605 | 14,605 |

**Table 5 (Continued)**

|  |  |  |
| --- | --- | --- |
| Variables | Parameter estimate | |
| *Panel B: AR as Dependent Variable* | | |
| Intercept | -0.0063 | -0.0311\*\* |
|  | (1.00) | (2.07) |
| **DisclosureRep** | **-0.0093\*\*** | **-0.0350** |
|  | **(2.42)** | **(1.55)** |
| Institutional ownership percentage |  | 0.0097 |
|  |  | (1.16) |
| **Institutional ownership percentage\*DisclosureRep** |  | **-0.0278** |
|  |  | **(1.19)** |
| Number of analyst following |  | -0.0006\*\*\* |
|  |  | (3.53) |
| **Number of analyst following\* DisclosureRep** |  | **0.0007\*\*** |
|  |  | **(2.00)** |
| Outside director percentage |  | -0.0005 |
|  |  | (0.08) |
| **Outside director percentage\* DisclosureRep** |  | **0.0572\*\*\*** |
|  |  | **(2.75)** |
| Log market value | 0.0003 | 0.0017\*\*\* |
|  | (0.67) | (2.84) |
| Market-to-book ratio | 0.0001 | 0.0002 |
|  | (1.52) | (1.59) |
| Litigation industry | 0.0001 | 0.0018 |
|  | (0.08) | (0.94) |
| Return on equity | -0.0025 | -0.0027\* |
|  | (1.64) | (1.73) |
| Loss | -0.0012 | -0.0002 |
|  | (0.75) | (0.14) |
| Earnings volatility | -3.5683\* | -3.3381 |
|  | (1.77) | (1.64) |
| Prior cumulative abnormal returns | 0.0134 | 0.0131 |
|  | (1.27) | (1.24) |
| Stock compensation of CEO | -0.0024 | -0.0018 |
|  | (1.59) | (1.29) |
| Stock compensation of CEO\*DisclosureRep | -0.0221\*\*\* | -0.0159\*\*\* |
|  | (3.92) | (6.58) |
|  |  |  |
| N | 14,605 | 14,605 |