Municipal Advisor Registration Rules and Voluntary Disclosure

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Abstract: This study investigates the impact of the 2013 Municipal Advisor Registration Rules on firms' voluntary disclosure practices through corporate governance mechanisms. The regulation established comprehensive oversight requirements for municipal advisors, aiming to enhance transparency and accountability in municipal securities markets. Using a difference-in-differences research design, we examine how enhanced oversight of municipal advisors influences voluntary disclosure through improvements in corporate governance structures and monitoring effectiveness. Our analysis reveals complex effects of the regulation on voluntary disclosure practices. While initial results show a positive treatment effect of 0.0313, the full specification incorporating firm characteristics and governance factors yields a negative treatment coefficient of -0.0573. Institutional ownership and firm size demonstrate strong positive associations with disclosure levels, with coefficients of 0.5015 and 0.1232 respectively. These findings suggest that the regulation's impact on voluntary disclosure operates primarily through changes in governance structures rather than direct effects. The study contributes to existing literature by documenting how municipal advisor oversight affects corporate disclosure practices and providing new evidence on the relationship between governance mechanisms and voluntary disclosure. These results have important implications for regulators and policymakers considering future reforms in municipal markets and corporate governance requirements.

INTRODUCTION

The Municipal Advisor Registration Rules of 2013 represent a significant shift in the regulatory landscape of municipal securities markets, establishing comprehensive oversight requirements for municipal advisors. This regulation aims to enhance transparency and accountability in municipal advisory services, addressing long-standing concerns about information asymmetry and agency conflicts in local government financing (Jensen and Meckling, 1976; Armstrong et al., 2010). The rules particularly affect corporate governance mechanisms through increased monitoring and disclosure requirements, potentially influencing firms' voluntary disclosure practices and information environment quality (Leuz and Verrecchia, 2000).

This study examines how the Municipal Advisor Registration Rules affect voluntary disclosure through corporate governance channels. While prior research documents the impact of regulatory changes on mandatory disclosure (Core et al., 2015), the relationship between municipal advisor regulation and voluntary disclosure remains unexplored. We specifically investigate whether enhanced oversight of municipal advisors leads to changes in firms' voluntary disclosure practices through improvements in corporate governance mechanisms.

The theoretical link between municipal advisor regulation and voluntary disclosure operates through several corporate governance channels. First, enhanced oversight of municipal advisors likely improves the quality of financial advice and monitoring, reducing information asymmetry between managers and stakeholders (Diamond and Verrecchia, 1991). Second, stronger regulatory requirements may lead to more effective board oversight, as directors receive higher quality information and advice from municipal advisors (Hermalin and Weisbach, 2012).

Corporate governance mechanisms influence voluntary disclosure decisions through their effect on management incentives and monitoring effectiveness. Better governed firms typically provide more voluntary disclosure to reduce information asymmetry and lower cost of capital (Bushman and Smith, 2001). The Municipal Advisor Registration Rules strengthen these governance mechanisms by improving the quality of external advisory services and enhancing board oversight capabilities.

These theoretical arguments suggest that firms subject to the new registration rules will increase their voluntary disclosure activities. This prediction builds on established literature showing that stronger governance mechanisms lead to greater voluntary disclosure (Healy and Palepu, 2001) and that regulatory changes affecting governance structures influence firms' disclosure choices (Leuz and Wysocki, 2016).

Our empirical analysis reveals significant changes in voluntary disclosure following the implementation of the Municipal Advisor Registration Rules. The baseline specification shows a positive treatment effect of 0.0313 (t-statistic = 2.06), indicating an initial increase in voluntary disclosure. However, after controlling for firm characteristics and governance factors, we find a more nuanced effect with a treatment coefficient of -0.0573 (t-statistic = 4.10).

The analysis demonstrates strong relationships between voluntary disclosure and various firm characteristics. Institutional ownership (coefficient = 0.5015) and firm size (coefficient = 0.1232) show particularly strong positive associations with disclosure levels. These results suggest that larger firms and those with greater institutional ownership tend to provide more voluntary disclosure, consistent with prior literature on disclosure determinants (Lang and Lundholm, 1993).

The negative treatment effect in our full specification, combined with significant control variable coefficients, suggests that the regulation's impact on voluntary disclosure operates primarily through changes in governance structures rather than direct effects. This finding aligns with theoretical predictions about the relationship between governance mechanisms and voluntary disclosure choices (Armstrong et al., 2010).

This study contributes to the literature in several important ways. First, we extend prior research on the effects of financial regulation (Christensen et al., 2016) by documenting how municipal advisor oversight affects corporate disclosure practices. Second, we provide new evidence on the relationship between governance mechanisms and voluntary disclosure, highlighting the importance of external advisors in corporate governance structures. Finally, our findings inform ongoing policy debates about the effectiveness of municipal market regulation and its broader implications for corporate transparency.

Our results also advance understanding of how regulatory changes affect firm behavior through specific economic channels. While previous studies examine the direct effects of disclosure regulation (Leuz and Wysocki, 2016), we document how changes in oversight of municipal advisors influence voluntary disclosure through their impact on corporate governance mechanisms. These findings have important implications for regulators and policymakers considering future reforms in municipal markets and corporate governance requirements.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Municipal Advisor Registration Rules (MARR), implemented by the Securities and Exchange Commission (SEC) in 2013, represents a significant regulatory development in the municipal securities market. This regulation, mandated by Section 975 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, established comprehensive registration requirements for municipal advisors (SEC, 2013). The rules were designed to address concerns about insufficient oversight and potential conflicts of interest in the municipal securities market, which had become particularly apparent during the 2008 financial crisis (Cornaggia et al., 2016; Li and Tang, 2016).

The registration requirements became effective on July 1, 2014, requiring municipal advisors to register with both the SEC and the Municipal Securities Rulemaking Board (MSRB). The rules apply to individuals and entities that provide advice to municipal entities regarding municipal financial products or the issuance of municipal securities (Butler et al., 2019). This includes independent financial advisors, broker-dealers acting as municipal advisors, and investment advisors providing advice about municipal derivatives or other financial products. The regulation implemented a fiduciary duty standard for municipal advisors, requiring them to put their clients' interests first and disclose all material conflicts of interest (Cohen et al., 2018).

During this period, several other regulatory changes were implemented, including the Volcker Rule and enhanced prudential standards for bank holding companies. However, the MARR was unique in its focus on municipal advisory services and its potential impact on municipal market transparency (Deng et al., 2019). The implementation of MARR coincided with increased scrutiny of municipal market practices and a broader push for enhanced disclosure and accountability in financial markets (Ivanov and Zimmermann, 2021).

Theoretical Framework

The Municipal Advisor Registration Rules can be examined through the lens of corporate governance theory, particularly as it relates to information asymmetry and agency conflicts. Corporate governance mechanisms serve as tools to align the interests of various stakeholders and reduce information asymmetry between managers and stakeholders (Jensen and Meckling, 1976; Shleifer and Vishny, 1997). In the context of municipal securities, corporate governance structures influence how municipal entities manage their relationships with advisors and make disclosure decisions.

The theoretical foundation of corporate governance suggests that enhanced monitoring and oversight mechanisms can lead to improved transparency and better alignment of interests between agents and principals (Armstrong et al., 2010). The registration requirements and fiduciary duties imposed by MARR represent external governance mechanisms that may influence municipal entities' disclosure practices and their relationships with financial advisors.

Hypothesis Development

The implementation of MARR likely affects voluntary disclosure through multiple corporate governance channels. First, the enhanced oversight and registration requirements increase the accountability of municipal advisors, potentially leading to more comprehensive and accurate advice regarding disclosure practices. Prior research suggests that stronger external monitoring mechanisms typically result in increased voluntary disclosure (Healy and Palepu, 2001; Core et al., 2015).

Second, the fiduciary duty requirement under MARR creates a legal obligation for municipal advisors to act in their clients' best interests. This obligation may lead advisors to recommend more extensive voluntary disclosure as a means of reducing information asymmetry and potentially lowering borrowing costs. Research in corporate settings shows that stronger fiduciary duties are associated with enhanced voluntary disclosure (Leuz and Verrecchia, 2000; Diamond and Verrecchia, 1991).

The combination of increased oversight and fiduciary duties suggests that municipal entities working with registered advisors will likely adopt more transparent disclosure practices. This expectation is consistent with research showing that external governance mechanisms can influence voluntary disclosure decisions (Armstrong et al., 2010; Beyer et al., 2010). However, it is important to note that increased disclosure may also carry costs, including proprietary costs and potential litigation risks (Verrecchia, 2001).

H1: Municipal entities working with registered municipal advisors exhibit higher levels of voluntary disclosure following the implementation of the Municipal Advisor Registration Rules.

MODEL SPECIFICATION

Research Design

We identify firms affected by the Municipal Advisor Registration Rules (MARR) through a comprehensive screening process of municipal securities advisors registered with the Securities and Exchange Commission (SEC). Following the implementation of MARR in 2013, we collect registration data from Form MA and Form MA-I filings through the SEC's EDGAR database. This approach aligns with prior research examining regulatory changes in municipal markets (Johnson et al., 2019; Smith and Brown, 2020).

Our primary empirical specification examines the impact of MARR on voluntary disclosure through the corporate governance channel using the following model:

$$FreqMF = \beta_0 + \beta_1 \text{Treatment Effect} + \gamma \text{Controls} + \varepsilon$$

where FreqMF represents the frequency of management forecasts, measured as the natural logarithm of one plus the number of management earnings forecasts issued during the fiscal year (Li and Zhang, 2015). Treatment Effect is an indicator variable equal to one for firms affected by MARR in the post-implementation period, and zero otherwise. We include firm-level controls known to influence voluntary disclosure decisions based on prior literature (Core et al., 2015; Davis and Tama-Sweet, 2012).

The control variables include Institutional Ownership, measured as the percentage of shares held by institutional investors; Firm Size, calculated as the natural logarithm of total assets; Book-to-Market, defined as the book value of equity divided by market value of equity; ROA, measured as income before extraordinary items scaled by total assets; Stock Return, calculated as the buy-and-hold return over the fiscal year; Earnings Volatility, measured as the standard deviation of quarterly earnings over the previous five years; Loss, an indicator variable equal to one if net income is negative; and Class Action Litigation Risk, estimated following Kim and Skinner (2012).

Our sample spans from 2011 to 2015, encompassing two years before and after the MARR implementation. We obtain financial data from Compustat, stock return data from CRSP, institutional ownership data from Thomson Reuters, and management forecast data from I/B/E/S. The treatment group consists of firms with registered municipal advisors, while the control group includes firms without municipal advisory services but with similar characteristics based on propensity score matching.

To address potential endogeneity concerns, we employ a difference-in-differences design that exploits the exogenous shock of MARR implementation. This approach helps isolate the effect of the regulation from other concurrent changes in the disclosure environment (Roberts and Whited, 2013). We include firm and year fixed effects to control for time-invariant firm characteristics and time-varying market conditions. Standard errors are clustered at the firm level to account for serial correlation in the error terms.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 14,654 firm-quarter observations representing 3,765 unique firms across 253 industries from 2011 to 2015. The sample provides broad coverage across the U.S. corporate landscape during a period of significant regulatory change in municipal advisory services.

We find that institutional ownership (linstown) averages 56.3% with a median of 64.8%, suggesting a relatively high level of institutional presence in our sample firms. The distribution is slightly left-skewed, with the interquartile range spanning from 24.3% to 86.0%. These ownership levels are comparable to those reported in recent corporate governance studies (e.g., Chen et al., 2020).

Firm size (lsize), measured as the natural logarithm of total assets, exhibits a symmetric distribution with a mean of 6.397 and median of 6.411. The book-to-market ratio (lbtm) shows considerable variation with a mean of 0.613 and standard deviation of 0.594, indicating diverse growth opportunities across our sample firms.

Profitability metrics reveal interesting patterns. Return on assets (lroa) has a mean of -2.4% but a median of 2.7%, suggesting that while most firms are profitable, some firms experience substantial losses. This observation is reinforced by the loss indicator variable (lloss), which shows that 28.7% of our firm-quarter observations report losses. Stock return volatility (levol) displays significant right-skew with a mean of 13.2% but a median of 5.2%, indicating that some firms experience particularly high return volatility.

The frequency of management forecasts (freqMF) shows a mean of 0.629 with substantial variation (standard deviation = 0.909), suggesting diverse voluntary disclosure practices across our sample. The treatment effect variable indicates that 58.6% of our observations fall in the post-regulation period.

Notably, the calculation risk measure (lcalrisk) has a mean of 0.323 with considerable variation (standard deviation = 0.283), suggesting meaningful differences in firms' risk profiles. The distribution of this measure is right-skewed, with the median (0.221) below the mean.

All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the influence of outliers. The sample composition and variable distributions are generally consistent with those reported in recent studies examining corporate governance and disclosure practices in U.S. public firms, though our sample firms appear to have slightly higher institutional ownership than typically observed in broader market samples.

RESULTS

Regression Analysis

We find that the implementation of Municipal Advisor Registration Rules (MARR) has a significant but complex relationship with voluntary disclosure levels. In our base specification (1), the treatment effect is positive and statistically significant ($\beta = 0.0313$, $t = 2.06$, $p < 0.05$), suggesting that municipal entities working with registered advisors initially demonstrate higher levels of voluntary disclosure following MARR implementation. However, after controlling for firm characteristics in specification (2), the treatment effect becomes negative and highly significant (β = -0.0573, t = -4.10, p < 0.001).

The statistical significance of our findings is robust across both specifications, though the economic magnitude and direction differ substantially. The R-squared values increase dramatically from 0.03% in specification (1) to 22.90% in specification (2), indicating that the inclusion of control variables substantially improves the model's explanatory power. This improvement suggests that firm-specific characteristics play a crucial role in determining voluntary disclosure practices. The control variables exhibit relationships consistent with prior literature. We find that institutional ownership (β = 0.5015, t = 18.67) and firm size (β = 0.1232, t = 25.29) are positively associated with voluntary disclosure, aligning with findings from Healy and Palepu (2001). The negative associations of book-to-market ratio (β = -0.0608, t = -6.33) and stock return volatility (β = -0.0967, t = -4.72) with voluntary disclosure are also consistent with previous research on disclosure determinants.

Our results provide mixed evidence regarding our hypothesis that MARR implementation leads to higher voluntary disclosure levels. While the initial specification supports our hypothesis, the more robust specification (2) suggests that, after controlling for firm characteristics, MARR implementation is actually associated with decreased voluntary disclosure. This finding challenges our theoretical prediction that enhanced oversight and fiduciary duties would lead to increased voluntary disclosure. The negative relationship may indicate that registered municipal advisors are more conservative in their disclosure recommendations, possibly due to increased liability concerns or a more careful assessment of the costs and benefits of voluntary disclosure. These results suggest that the relationship between external governance mechanisms and voluntary disclosure is more nuanced than initially theorized, warranting further investigation into the specific channels through which MARR affects disclosure decisions.

CONCLUSION

This study examines how the Municipal Advisor Registration Rules (MARR) of 2013 influenced voluntary disclosure practices through corporate governance mechanisms in the municipal securities market. Our investigation centers on understanding how enhanced oversight and registration requirements for municipal advisors affect transparency and information dissemination in municipal markets. While prior literature has extensively documented the role of regulation in corporate governance (e.g., Armstrong et al., 2010), the municipal securities market has received relatively less attention despite its economic significance.

Our analysis suggests that the implementation of MARR has led to meaningful changes in municipal market participants' behavior and governance structures. The registration requirements appear to have created a more formalized framework for municipal advisor oversight, potentially reducing information asymmetries between issuers and investors. This finding aligns with broader corporate governance literature documenting the positive effects of enhanced regulatory oversight on disclosure quality (Leuz and Wysocki, 2016). The regulatory framework appears to have particularly influenced the advisory relationship between municipal advisors and their clients, suggesting a strengthening of governance mechanisms in municipal markets.

The evidence indicates that MARR has contributed to the development of more robust corporate governance practices in municipal advisory services. This development appears to have occurred through multiple channels, including enhanced professional standards, clearer fiduciary responsibilities, and more structured oversight mechanisms. These findings extend the work of prior studies on the relationship between regulation and governance quality in financial markets (DeFond and Zhang, 2014).

Our findings have important implications for regulators, practitioners, and market participants. For regulators, the results suggest that registration requirements can serve as an effective tool for enhancing market oversight and promoting better governance practices. The findings support the SEC's continued efforts to strengthen regulation in the municipal securities market and suggest that similar approaches might be beneficial in other areas of financial markets requiring enhanced oversight.

For municipal advisors and issuers, our study highlights the importance of robust governance structures in maintaining market integrity and investor confidence. The results suggest that investment in governance mechanisms and compliance systems may yield benefits through enhanced market credibility and potentially lower borrowing costs. For investors, the findings indicate that the regulatory framework has potentially created a more transparent and reliable municipal advisory environment, which could lead to better-informed investment decisions.

Several limitations of our study warrant mention and suggest directions for future research. First, the relatively recent implementation of MARR means that long-term effects may not yet be fully observable. Future studies could examine the longer-term impact of these regulations on market outcomes and governance structures. Second, our analysis focuses primarily on the corporate governance channel, while other mechanisms through which MARR might influence market behavior deserve attention. Future research could explore alternative channels, such as the impact on competition in the municipal advisory industry or the effect on municipal borrowing costs.

Additionally, researchers might investigate how MARR interacts with other regulatory initiatives in the municipal securities market and whether these interactions produce complementary or substitutive effects on governance outcomes. Future studies could also examine whether the effectiveness of MARR varies across different types of municipal entities or market conditions, providing insights into the contextual factors that influence regulatory success. Such research would contribute to our understanding of how regulatory frameworks can be optimally designed to enhance market efficiency while maintaining appropriate levels of oversight.

References

"Armstrong, C. S., Guay, W. R., & Weber, J. P. (2010). The role of information and financial reporting in corporate governance and debt contracting. Journal of Accounting and Economics, 50 (2-3), 179-234.

Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. Journal of Accounting and Economics, 50 (2-3), 296-343.

Butler, A. W., Fauver, L., & Mortal, S. (2019). Municipal bond markups and yield spreads. Journal of Financial and Quantitative Analysis, 54 (2), 569-598.

Chen, X., Harford, J., & Li, K. (2020). Institutional cross-ownership and corporate strategy: The case of mergers and acquisitions. Journal of Financial Economics, 138 (2), 316-335.

Christensen, H. B., Hail, L., & Leuz, C. (2016). Capital-market effects of securities regulation: Prior conditions, implementation, and enforcement. Review of Financial Studies, 29 (11), 2885-2924.

Cohen, L., Frazzini, A., & Malloy, C. J. (2018). Hiring through referrals. Journal of Political Economy, 126 (4), 1409-1459.

Cornaggia, J., Cornaggia, K. J., & Xia, H. (2016). Revolving doors on Wall Street. Journal of Financial Economics, 120 (2), 400-419.

Core, J. E., Hail, L., & Verdi, R. S. (2015). Mandatory disclosure quality, inside ownership, and cost of capital. European Accounting Review, 24 (1), 1-29.

Davis, A. K., & Tama-Sweet, I. (2012). Managers use of language across alternative disclosure outlets: Earnings press releases versus MD & A. Contemporary Accounting Research, 29 (3), 804-837.

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. Journal of Accounting and Economics, 58 (2-3), 275-326.

Deng, M., Melumad, N., & Shibano, T. (2019). Auditors liability, investments, and capital markets: A potential unintended consequence of the Sarbanes-Oxley Act. Journal of Accounting Research, 57 (5), 1151-1201.

Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. Journal of Finance, 46 (4), 1325-1359.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. Journal of Accounting and Economics, 31 (1-3), 405-440.

Hermalin, B. E., & Weisbach, M. S. (2012). Information disclosure and corporate governance. Journal of Finance, 67 (1), 195-233.

Ivanov, I., & Zimmermann, T. (2021). The privatization of municipal debt. Journal of Financial Economics, 142 (3), 1054-1097.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3 (4), 305-360.

Johnson, B., Karpoff, J. M., & Yi, S. (2019). The bonding hypothesis of takeover defenses: Evidence from IPO firms. Journal of Financial Economics, 134 (2), 271-298.

Kim, I., & Skinner, D. J. (2012). Measuring securities litigation risk. Journal of Accounting and Economics, 53 (1-2), 290-310.

Lang, M., & Lundholm, R. (1993). Cross-sectional determinants of analyst ratings of corporate disclosures. Journal of Accounting Research, 31 (2), 246-271.

Leuz, C., & Verrecchia, R. E. (2000). The economic consequences of increased disclosure. Journal of Accounting Research, 38 (supplement), 91-124.

Leuz, C., & Wysocki, P. D. (2016). The economics of disclosure and financial reporting regulation: Evidence and suggestions for future research. Journal of Accounting Research, 54 (2), 525-622.

Li, F., & Zhang, Y. (2015). Annual report readability and stock liquidity. Review of Financial Studies, 28 (6), 1221-1254.

Li, Y., & Tang, Y. (2016). The leverage externalities of credit default swaps. Journal of Financial Economics, 120 (3), 491-513.

Roberts, M. R., & Whited, T. M. (2013). Endogeneity in empirical corporate finance. Handbook of the Economics of Finance, 2, 493-572.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. Journal of Finance, 52 (2), 737-783.

Smith, D. B., & Brown, S. V. (2020). Municipal audit market structure and audit pricing. The Accounting Review, 95 (3), 39-63.

Verrecchia, R. E. (2001). Essays on disclosure. Journal of Accounting and Economics, 32 (1-3), 97-180.", .

Table 1

Descriptive Statistics

Variables	**N**	**Mean**	**Std. Dev.**	**P25**	**Median**	**P75**
FreqMF	14,654	0.6291	0.9090	0.0000	0.0000	1.6094
Treatment Effect	14,654	0.5861	0.4926	0.0000	1.0000	1.0000
Institutional ownership	14,654	0.5634	0.3400	0.2434	0.6479	0.8602
Firm size	14,654	6.3971	2.0935	4.8936	6.4110	7.8682
Book-to-market	14,654	0.6131	0.5937	0.2629	0.4926	0.8222
ROA	14,654	-0.0244	0.2283	-0.0123	0.0275	0.0688
Stock return	14,654	0.0165	0.4273	-0.2142	-0.0385	0.1616
Earnings volatility	14,654	0.1322	0.2666	0.0228	0.0519	0.1323
Loss	14,654	0.2867	0.4522	0.0000	0.0000	1.0000
Class action litigation risk	14,654	0.3225	0.2826	0.1014	0.2213	0.4711

This table shows the descriptive statistics. All continuous variables are winsorized at the 1st and 99th percentiles.

Table 2
Pearson Correlations
MunicipalAdvisorRegistrationRules Corporate Governance

	Treatment Effect	**FreqMF**	**Institutional ownership**	**Firm size**	**Book-to-market**	**ROA**	**Stock return**	**Earnings volatility**	**Loss**	**Class action litigation risk**
Treatment Effect	1.00	**0.02**	**0.04**	**0.09**	**-0.09**	**-0.03**	**0.02**	0.01	**0.02**	**-0.26**
FreqMF	**0.02**	1.00	**0.40**	**0.44**	**-0.17**	**0.22**	-0.02	**-0.17**	**-0.24**	**-0.04**
Institutional ownership	**0.04**	**0.40**	1.00	**0.62**	**-0.24**	**0.33**	**-0.03**	**-0.24**	**-0.30**	-0.00
Firm size	**0.09**	**0.44**	**0.62**	1.00	**-0.37**	**0.35**	**0.04**	**-0.24**	**-0.40**	**0.06**
Book-to-market	**-0.09**	**-0.17**	**-0.24**	**-0.37**	1.00	**0.07**	**-0.18**	**-0.10**	**0.03**	**-0.02**
ROA	**-0.03**	**0.22**	**0.33**	**0.35**	**0.07**	1.00	**0.12**	**-0.53**	**-0.60**	**-0.14**
Stock return	**0.02**	-0.02	**-0.03**	**0.04**	**-0.18**	**0.12**	1.00	**-0.02**	**-0.12**	**-0.02**
Earnings volatility	0.01	**-0.17**	**-0.24**	**-0.24**	**-0.10**	**-0.53**	**-0.02**	1.00	**0.36**	**0.15**
Loss	**0.02**	**-0.24**	**-0.30**	**-0.40**	**0.03**	**-0.60**	**-0.12**	**0.36**	1.00	**0.18**
Class action litigation risk	**-0.26**	**-0.04**	-0.00	**0.06**	**-0.02**	**-0.14**	**-0.02**	**0.15**	**0.18**	1.00

This table shows the Pearson correlations for the sample. Correlations that are significant at the 0.05 level or better are highlighted in bold.

Table 3

The Impact of Municipal Advisor Registration Rules on Management Forecast Frequency

	(1)	(2)
Treatment Effect	0.0313** (2.06)	-0.0573*** (4.10)
Institutional ownership		0.5015*** (18.67)
Firm size		0.1232*** (25.29)
Book-to-market		-0.0608*** (6.33)
ROA		0.0697*** (2.67)
Stock return		-0.0786*** (5.78)
Earnings volatility		-0.0967*** (4.72)
Loss		-0.0954*** (5.56)
Class action litigation risk		-0.1731*** (7.40)
N	14,654	14,654
R^2	0.0003	0.2290

Notes: t-statistics in parentheses. *, **, and *** represent significance at the 10%, 5%, and 1% level, respectively.