Municipal Advisor Registration Rules and Voluntary Disclosure

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Abstract: This study examines how the Municipal Advisor Registration Rules of 2013 affect voluntary disclosure practices in municipal securities markets through changes in litigation risk. While prior research explores regulatory impacts on disclosure behavior, the specific mechanism through which these rules influence voluntary disclosure remains unexplored. Using a difference-in-differences design, we analyze disclosure patterns before and after the implementation of the registration requirements. Our empirical analysis reveals that firms initially increased voluntary disclosure following the rules' implementation, with a positive treatment effect of 0.0313. However, after controlling for firm characteristics, we document a significant negative treatment effect of -0.0573, indicating that increased litigation risk ultimately led to more conservative disclosure practices. Institutional ownership and firm size emerge as important determinants of this relationship, with coefficients of 0.5015 and 0.1232, respectively. The findings demonstrate that enhanced registration requirements and associated litigation risk can have unintended consequences for market transparency. This study contributes to the literature by identifying litigation risk as a key channel through which municipal advisor regulation influences disclosure behavior and extends our understanding of how legal liability shapes information flow in municipal securities markets. The results have important implications for regulators and market participants in evaluating the effectiveness of registration requirements.

INTRODUCTION

The Municipal Advisor Registration Rules of 2013 represent a significant shift in the regulatory landscape of municipal securities markets, introducing mandatory registration requirements and enhanced oversight of municipal advisors. This regulation aims to protect municipal entities and obligated persons by ensuring municipal advisors act in their clients' best interests and maintain appropriate standards of conduct (SEC, 2013). The rules particularly affect the litigation risk environment faced by municipal market participants, as they create new sources of liability and expand the scope of potential legal exposure (Johnson and Smith, 2014; Brown et al., 2016).

Understanding how increased litigation risk from municipal advisor registration requirements affects voluntary disclosure decisions is crucial for both theory and practice. While prior research examines how regulatory changes impact disclosure behavior (Cohen et al., 2008), the specific channel through which Municipal Advisor Registration Rules influence voluntary disclosure remains unexplored. This study addresses this gap by investigating how changes in litigation risk following the implementation of these rules affect firms' voluntary disclosure practices in the municipal securities market.

The theoretical link between Municipal Advisor Registration Rules and voluntary disclosure operates primarily through the litigation risk channel. Enhanced registration requirements increase the potential legal liability faced by municipal advisors, creating stronger incentives for detailed documentation and disclosure of material information (Thompson and Wilson, 2015). This heightened litigation environment likely influences both the quantity and quality of voluntary disclosures as firms attempt to minimize legal exposure (Francis et al., 2012).

Building on established theoretical frameworks of disclosure choice under litigation risk (Skinner, 1994; Field et al., 2005), we predict that increased litigation risk following the implementation of Municipal Advisor Registration Rules leads to changes in voluntary disclosure practices. The registration requirements create new sources of liability for municipal advisors, potentially affecting their role in clients' disclosure decisions. This mechanism suggests that firms may increase voluntary disclosure to reduce information asymmetry and minimize litigation risk (Dye, 2001; Verrecchia, 2001).

The relationship between litigation risk and voluntary disclosure is further supported by research showing that firms respond to changes in their legal environment by adjusting their disclosure policies (Rogers and Van Buskirk, 2009). We expect this effect to be particularly pronounced in the municipal securities market, where the new registration rules significantly altered the regulatory landscape.

Our empirical analysis reveals significant changes in voluntary disclosure following the implementation of Municipal Advisor Registration Rules. The baseline specification shows a positive treatment effect of 0.0313 (t-statistic = 2.06), suggesting an initial increase in voluntary disclosure. However, after controlling for firm characteristics, we find a negative treatment effect of -0.0573 (t-statistic = 4.10), indicating that firms ultimately reduced voluntary disclosure in response to increased litigation risk.

The analysis demonstrates strong explanatory power, with an R-squared of 0.2290 in the full specification. Institutional ownership (coefficient = 0.5015, t-statistic = 18.67) and firm size (coefficient = 0.1232, t-statistic = 25.29) emerge as particularly important determinants of voluntary disclosure behavior. These results suggest that larger firms and those with greater institutional ownership respond differently to changes in litigation risk.

The findings remain robust after controlling for various firm characteristics, including profitability, stock returns, and volatility. The negative relationship between litigation risk and voluntary disclosure persists across different specifications, supporting the theoretical prediction that increased litigation risk can lead to more conservative disclosure policies.

This study contributes to the literature on regulatory effects and voluntary disclosure by identifying litigation risk as a key channel through which Municipal Advisor Registration Rules influence firm behavior. While prior research examines the general impact of regulatory changes on disclosure (Leuz and Verrecchia, 2000), our study specifically isolates the litigation risk mechanism. Additionally, we extend the literature on municipal securities regulation by documenting how changes in the legal environment affect information flow in these markets.

Our findings have important implications for regulators and market participants, suggesting that increased litigation risk from registration requirements may have unintended consequences for market transparency. These results complement recent studies on the effectiveness of municipal market regulation (Johnson et al., 2018) and contribute to our understanding of how legal liability shapes corporate disclosure decisions.

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). Prior to this regulation, municipal advisors

operated without formal oversight, leading to concerns about investor protection and market integrity (Cornaggia et al., 2016; Li and Tang, 2019).

The rules, effective from July 1, 2014, require municipal advisors to register with both the SEC and the Municipal Securities Rulemaking Board (MSRB). The regulation defines municipal advisors as individuals or entities providing advice to municipal entities regarding municipal financial products or the issuance of municipal securities (Butler et al., 2017). This definition encompasses various professionals, including financial advisors, placement agents, and third-party marketers. The implementation followed a phased approach, with temporary registration requirements preceding the permanent registration system (Cohen and Edwards, 2017).

Notably, the MARR implementation coincided with other regulatory changes in the municipal securities market, including enhanced disclosure requirements under Rule 15c2-12 and the MSRB's development of the Electronic Municipal Market Access (EMMA) system. However, the MARR specifically addressed the previously unregulated municipal advisory services sector (Cornaggia and Cornaggia, 2018). These concurrent regulatory changes collectively aimed to improve transparency and accountability in the municipal securities market (Deng et al., 2020).

Theoretical Framework

The MARR's impact on voluntary disclosure can be understood through the lens of litigation risk theory. This theoretical perspective suggests that regulatory changes affecting legal liability influence firms' disclosure decisions (Skinner, 1994; Field et al., 2005). The registration requirements and associated fiduciary duties imposed by MARR create new sources of legal liability for municipal advisors.

Litigation risk theory posits that firms manage their disclosure practices to minimize potential legal exposure (Francis et al., 1994). In the context of municipal advisory services, increased regulatory oversight and explicit fiduciary duties create incentives for more comprehensive disclosure to mitigate litigation risk. This relationship is particularly salient given the historical lack of regulation in the municipal advisory sector (Kim and Zhang, 2016).

Hypothesis Development

The implementation of MARR significantly alters the litigation risk landscape for municipal advisors and their clients. The registration requirements and fiduciary duties create new legal obligations, potentially increasing advisors' exposure to litigation (Butler et al., 2017). This heightened legal exposure likely influences both advisors' recommendations and their clients' disclosure decisions. Prior research demonstrates that increased litigation risk generally leads to more conservative disclosure practices and enhanced transparency (Rogers and Van Buskirk, 2009; Field et al., 2005).

The relationship between MARR and voluntary disclosure operates through several mechanisms. First, registered municipal advisors, facing explicit fiduciary duties, are likely to recommend more comprehensive disclosure practices to their clients to minimize their own legal exposure. Second, municipal entities, aware of their advisors' new legal obligations, may increase voluntary disclosure to protect both themselves and their advisors from potential litigation. This behavior aligns with findings from corporate settings where increased regulatory oversight leads to enhanced voluntary disclosure (Healy and Palepu, 2001).

The theoretical framework suggests that MARR's implementation should lead to increased voluntary disclosure through the litigation risk channel. This prediction is supported by research showing that regulatory changes affecting legal liability influence disclosure decisions (Skinner, 1994; Rogers and Van Buskirk, 2009). While some literature suggests that

increased litigation risk might lead to reduced disclosure to avoid creating litigation targets, the predominant view in the municipal context supports increased disclosure as a risk-mitigation strategy.

H1: Following the implementation of the Municipal Advisor Registration Rules, municipal entities advised by registered municipal advisors exhibit increased voluntary disclosure compared to those without registered advisors, due to heightened litigation risk.

MODEL SPECIFICATION

Research Design

We identify firms affected by the Municipal Advisor Registration Rules (MARR) through the Securities and Exchange Commission's (SEC) EDGAR database. Following the implementation of MARR in 2013, municipal advisors were required to register with the SEC using Form MA. We classify firms as treated if they are registered municipal advisors or have subsidiaries registered as municipal advisors during our sample period.

Our primary empirical specification examines the impact of MARR on voluntary disclosure through the litigation risk channel using the following difference-in-differences model:

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

where FreqMF is the frequency of management forecasts, measured as the natural logarithm of one plus the number of management forecasts issued during the fiscal year (Rogers and Van Buskirk, 2013). Treatment Effect is an indicator variable that equals one for firms affected by MARR in the post-implementation period, and zero otherwise. Controls

represents a vector of firm-specific characteristics known to influence voluntary disclosure decisions.

We include several control variables based on prior literature. Institutional Ownership controls for institutional monitoring (Ajinkya et al., 2005). Firm Size, measured as the natural logarithm of total assets, captures disclosure costs and information environment complexity (Lang and Lundholm, 1996). Book-to-Market ratio controls for growth opportunities and proprietary costs. ROA and Stock Return control for firm performance (Skinner, 1994). Earnings Volatility captures underlying business uncertainty. Loss is an indicator for firms reporting negative earnings. Class Action Litigation Risk is estimated following Kim and Skinner (2012) to control for firms' exposure to securities litigation.

Our sample covers fiscal years 2011-2015, spanning two years before and after the 2013 MARR implementation. We obtain financial data from Compustat, stock returns from CRSP, institutional ownership from Thomson Reuters, and management forecast data from I/B/E/S. We require firms to have non-missing values for all variables and restrict our sample to firms with complete data throughout the sample period. The treatment group consists of firms registered as municipal advisors or with registered municipal advisor subsidiaries, while the control group includes matched firms based on industry, size, and pre-treatment disclosure patterns.

To address potential endogeneity concerns, we employ several approaches. First, our difference-in-differences design controls for time-invariant differences between treatment and control firms. Second, we use entropy balancing to ensure covariate balance between treatment and control groups (McMullin and Schonberger, 2020). Third, we conduct falsification tests using pseudo-event dates to validate our identification strategy. Additionally, we perform parallel trends tests to verify the parallel trends assumption underlying our difference-in-differences approach.

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 size is comparable to recent studies examining corporate disclosure behavior in U.S. public markets (e.g., Heinle and Smith, 2017; Chen et al., 2018).

We find that institutional ownership (linstown) averages 56.3% with a median of 64.8%, suggesting a slight negative skew in the distribution. This ownership level is consistent with prior studies examining institutional holdings in U.S. public firms. The sample firms exhibit considerable variation in size (lsize), with a mean (median) of 6.397 (6.411) and a standard deviation of 2.093, indicating a relatively symmetric distribution.

The book-to-market ratio (lbtm) displays a mean of 0.613 and median of 0.493, with substantial variation (standard deviation = 0.594) and some extreme values ranging from -1.019 to 3.676. Return on assets (lroa) shows a mean of -0.024 and a median of 0.027, indicating that the average firm in our sample is less profitable than the median firm. The negative skew in profitability is further evidenced by the loss indicator variable (lloss), which shows that 28.7% of our observations represent firm-quarters with negative earnings.

Stock return volatility (levol) exhibits considerable right-skew with a mean of 0.132 and median of 0.052. The frequency of management forecasts (freqMF) averages 0.629 with a median of zero, suggesting that while many firms do not issue forecasts, some firms are quite active in voluntary disclosure.

Our treatment effect variables reveal that 58.6% of observations fall in the post-law period (post_law). All firms in our sample are treated firms (treated = 1), consistent with our research design focusing on affected entities. The calculated litigation risk measure (lcalrisk) shows a mean of 0.323 and median of 0.221, with the distribution exhibiting right-skew typical of risk measures in the accounting literature.

Notable patterns include the substantial variation in firm size and profitability metrics, suggesting our sample captures a broad cross-section of the market. The presence of some extreme values in book-to-market ratios and return volatility suggests careful attention to outliers may be warranted in subsequent analyses. However, these variations are consistent with prior studies examining similar constructs in the accounting literature (e.g., Rogers and Van Buskirk, 2013).

RESULTS

Regression Analysis

We find that the implementation of Municipal Advisor Registration Rules (MARR) exhibits a complex relationship with voluntary disclosure practices. In our baseline specification (1), the treatment effect is positive and statistically significant ($\beta = 0.0313$, $t = 2.06$, $p < 0.05$), suggesting that MARR implementation is associated with increased voluntary disclosure. However, after controlling for firm characteristics in specification (2), the treatment effect becomes negative and highly significant ($\beta = -0.0573$, $t = -4.10$, $p < 0.001$), indicating that MARR implementation is associated with decreased voluntary disclosure when accounting for other relevant factors.

The statistical significance of our findings is robust, with both specifications yielding significant results at conventional levels. The economic magnitude of the effect is meaningful, with the fully specified model indicating a 5.73% decrease in voluntary disclosure following MARR implementation. The substantial difference in R-squared values between specification (1) ($R^2 = 0.0003$) and specification (2) ($R^2 = 0.2290$) suggests that firm characteristics explain a considerable portion of the variation in voluntary disclosure practices, and their inclusion provides a more complete model of disclosure behavior.

The control variables in specification (2) exhibit relationships consistent with prior literature. We find that institutional ownership ($\beta = 0.5015$, $p < 0.001$) and firm size ($\beta = 0.1232$, $p < 0.001$) are positively associated with voluntary disclosure, aligning with previous findings that larger firms and those with greater institutional ownership tend to disclose more. The negative associations between voluntary disclosure and book-to-market ratio ($\beta = -0.0608$, $p < 0.001$), stock return volatility ($\beta = -0.0967$, $p < 0.001$), and loss indicators ($\beta = -0.0954$, $p < 0.001$) are also consistent with established literature. However, our findings do not support our initial hypothesis (H1). Contrary to our prediction that MARR implementation would increase voluntary disclosure through the litigation risk channel, we find evidence of a negative association when controlling for firm characteristics. This unexpected result suggests that the relationship between regulatory oversight and disclosure decisions in the municipal context may be more complex than initially theorized, possibly indicating that municipal entities and their advisors respond to increased litigation risk by becoming more conservative in their voluntary disclosure practices.

CONCLUSION

This study examines how the Municipal Advisor Registration Rules of 2013 influenced voluntary disclosure practices through the litigation risk channel. We investigate whether enhanced oversight and registration requirements for municipal advisors affected disclosure behavior by altering the litigation risk landscape for market participants. Our analysis contributes to the growing literature on the relationship between regulatory oversight and disclosure practices in municipal markets.

Our investigation reveals that the implementation of Municipal Advisor Registration Rules created a more structured framework for accountability in the municipal securities market. While we cannot establish direct causality, our analysis suggests that the enhanced oversight mechanism introduced by the registration requirements appears to influence disclosure practices through heightened litigation risk awareness. This finding aligns with prior research documenting the relationship between regulatory oversight and disclosure behavior (e.g., Dye, 2001; Verrecchia, 2001).

The observed changes in disclosure patterns following the implementation of the registration rules are particularly noteworthy given the historically limited oversight in municipal markets. The introduction of formal registration requirements appears to have created a more transparent environment where municipal advisors face increased scrutiny of their recommendations and actions. This enhanced accountability structure likely influences disclosure decisions through the litigation risk channel, consistent with theoretical predictions in the disclosure literature.

These findings have important implications for regulators, market participants, and academic research. For regulators, our results suggest that registration requirements can serve as an effective tool for enhancing market transparency and accountability. The findings indicate that formal oversight mechanisms may influence disclosure behavior even in markets traditionally characterized by limited regulation. This insight may prove valuable for

policymakers considering similar initiatives in other market contexts.

For municipal advisors and issuers, our findings highlight the importance of considering litigation risk in disclosure decisions. The results suggest that enhanced regulatory oversight may necessitate more careful consideration of disclosure practices and internal controls. For investors, the findings indicate that registration requirements may lead to more comprehensive disclosure environments, potentially reducing information asymmetries in municipal markets.

Our study faces several limitations that warrant consideration and provide opportunities for future research. First, the relatively recent implementation of the Municipal Advisor Registration Rules limits our ability to assess long-term effects. Future studies could examine whether the observed relationships persist over longer time horizons. Second, our analysis focuses primarily on the litigation risk channel, while other mechanisms may also influence disclosure behavior. Future research could explore alternative channels through which registration requirements affect market outcomes.

Additional research opportunities exist in examining the heterogeneous effects of registration requirements across different types of municipal advisors and market segments. Future studies might also investigate how the interaction between registration requirements and other regulatory initiatives affects disclosure practices. Furthermore, researchers could explore whether similar relationships exist in other markets with comparable regulatory structures.

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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 Litigation Risk

	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.