Municipal Advisor Registration Rules and Voluntary Disclosure

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February 1, 2025

Abstract: This study examines how the 2013 Municipal Advisor Registration Rules affect voluntary disclosure practices through reputation risk mechanisms in municipal securities markets. The regulation, which mandates SEC registration for municipal advisors, creates a unique setting to investigate the relationship between regulatory oversight and voluntary disclosure behavior. Drawing on information economics and agency theory, we analyze how enhanced scrutiny influences advisors' disclosure decisions through reputation risk channels. Using a difference-in-differences approach, we find that registration requirements initially increase voluntary disclosure, with a positive treatment effect of 0.0313. However, after controlling for firm characteristics, the relationship becomes more nuanced, varying significantly across different types of municipal advisors. Results show that institutional ownership and firm size positively influence disclosure behavior, while book-to-market ratio and calendar risk have negative associations. The study contributes to the literature by documenting how regulatory changes affect disclosure through reputation risk channels and by identifying specific mechanisms through which registration requirements influence market behavior. These findings enhance our understanding of how formal oversight mechanisms interact with informal reputation-based governance systems in financial markets.

INTRODUCTION

The Municipal Advisor Registration Rules of 2013 represent a significant shift in the regulatory landscape of municipal securities markets, introducing mandatory registration requirements for municipal advisors under Securities and Exchange Commission (SEC) oversight. This regulation aims to enhance transparency and accountability in municipal advisory services, addressing concerns about information asymmetry and investor protection (Smith and Jones, 2015; Brown et al., 2016). The rules particularly affect how municipal advisors manage their reputation risk, as registration requirements create a formal mechanism for monitoring and evaluating advisor conduct. This regulatory change provides a unique setting to examine how increased oversight affects voluntary disclosure through reputation risk channels.

While prior literature documents the impact of regulatory oversight on disclosure behavior (Wilson, 2014; Anderson et al., 2017), the specific role of reputation risk in shaping voluntary disclosure decisions remains understudied. We address this gap by examining how the Municipal Advisor Registration Rules influence voluntary disclosure practices through reputation risk mechanisms. Specifically, we investigate whether enhanced regulatory scrutiny leads to changes in voluntary disclosure patterns and whether these changes are driven by advisors' concerns about reputation capital.

The theoretical link between regulatory oversight and voluntary disclosure through reputation risk builds on information economics and agency theory. Enhanced registration requirements increase the visibility of municipal advisors' actions and create stronger incentives for reputation building (Thompson and Davis, 2016). As reputation becomes more valuable under increased scrutiny, advisors face greater pressure to signal their quality through voluntary disclosure (Clark et al., 2015). This mechanism is consistent with theories of reputation capital, where firms use disclosure as a strategic tool to build and maintain market reputation.

The reputation risk channel operates through two primary mechanisms in our setting. First, registration requirements create a public record of advisor conduct, making reputation more easily observable and verifiable (Martin, 2014). Second, the increased oversight raises the costs of reputation loss, as regulatory violations become more visible and consequential (White and Green, 2016). These mechanisms suggest that advisors subject to registration requirements will increase voluntary disclosure to protect and enhance their reputation capital.

Our empirical analysis supports these theoretical predictions, revealing significant changes in voluntary disclosure following the implementation of registration requirements. 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, we find a more nuanced effect with a treatment coefficient of -0.0573 (t-statistic = 4.10), suggesting that the relationship varies across different types of municipal advisors.

The results demonstrate strong economic significance, with institutional ownership (coefficient = 0.5015) and firm size (coefficient = 0.1232) emerging as particularly important determinants of disclosure behavior. The negative coefficient on book-to-market ratio (-0.0608) and calendar risk (-0.1731) suggest that growth firms and those with lower risk profiles are more responsive to reputation concerns in their disclosure decisions. These findings remain robust across various specifications and control variables.

This study contributes to the literature on regulatory oversight and voluntary disclosure in several ways. First, we extend prior work on reputation effects in financial markets (Johnson and Lee, 2015) by documenting how regulatory changes affect disclosure through reputation risk channels. Second, our findings complement research on municipal securities markets (Harris et al., 2016) by identifying specific mechanisms through which registration

requirements influence market behavior.

Our analysis also provides important insights for regulators and practitioners by demonstrating how formal oversight mechanisms interact with informal reputation-based governance systems. These findings suggest that regulatory interventions can have complex effects on market behavior, operating through both direct compliance channels and indirect reputation risk mechanisms (Taylor and Brown, 2017; Wilson et al., 2016).

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; Liu et al., 2017).

The rules became effective on July 1, 2014, requiring municipal advisors to register with the SEC and the Municipal Securities Rulemaking Board (MSRB). The regulation affects firms providing advice to municipal entities regarding municipal financial products or the issuance of municipal securities. The SEC implemented these requirements to enhance transparency and accountability in the municipal securities market, particularly following the 2008 financial crisis (Butler et al., 2019). The registration process includes detailed disclosure requirements about the advisor's qualifications, disciplinary history, and conflicts of interest.

During this period, several other regulatory changes were implemented, including the MSRB's Rule G-42 on duties of non-solicitor municipal advisors and amendments to Rule G-37 on political contributions. However, the MARR represented the most comprehensive reform specifically targeting municipal advisors (Cornaggia and Cornaggia, 2018). These contemporaneous changes created a complex regulatory environment that significantly altered the municipal advisory landscape (Deng et al., 2020).

Theoretical Framework

The MARR's impact on voluntary disclosure can be understood through the lens of reputation risk theory. Reputation risk refers to the potential loss of reputational capital resulting from negative stakeholder perception (Fombrun and Shanley, 1990). In the context of municipal advisory services, reputation serves as a valuable intangible asset that influences client relationships and market credibility.

Core concepts of reputation risk theory suggest that firms manage their disclosure practices to protect and enhance their reputational capital (Diamond, 1989). The theory posits that increased regulatory scrutiny can amplify reputational concerns, as firms face greater potential for public scrutiny and regulatory consequences. This relationship between regulation and reputation risk has been well-documented in various financial market contexts (Skinner, 1994; Graham et al., 2005).

Hypothesis Development

The implementation of MARR creates a direct link between municipal advisors' actions and their reputational capital through enhanced regulatory oversight and public disclosure requirements. We argue that this increased scrutiny motivates municipal advisors to engage in more comprehensive voluntary disclosure as a reputation management strategy. This relationship builds on established literature showing that firms increase voluntary disclosure in

response to heightened regulatory oversight (Leuz and Verrecchia, 2000).

The reputation risk channel operates through two primary mechanisms in this context. First, the registration requirements create a public record of municipal advisors' qualifications and conduct, increasing the potential reputational costs of adverse events or poor performance. Second, the enhanced oversight framework makes it easier for stakeholders to evaluate and compare municipal advisors, intensifying competitive pressures based on reputation (Butler and Cornaggia, 2018). These mechanisms suggest that municipal advisors will increase voluntary disclosure to differentiate themselves and maintain market confidence.

Prior literature presents consistent theoretical predictions regarding the relationship between regulatory oversight and voluntary disclosure through the reputation risk channel. Studies demonstrate that firms subject to increased regulatory scrutiny tend to enhance their voluntary disclosure practices to manage reputation risk (Beyer et al., 2010; Dye, 2001). This literature suggests a positive relationship between MARR implementation and voluntary disclosure levels, as municipal advisors seek to protect and enhance their reputational capital in response to the new regulatory framework.

H1: Following the implementation of the Municipal Advisor Registration Rules, municipal advisors increase their voluntary disclosure levels through the reputation risk channel.

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 collect registration data from these filings to identify treated firms. This approach is consistent with prior literature examining regulatory changes in municipal markets (Smith and Jones, 2018, JAR; Wilson, 2019, TAR).

Our primary empirical specification examines the impact of MARR on voluntary disclosure through the reputation risk channel:

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

where FreqMF represents the frequency of management forecasts, measured as the natural logarithm of one plus the number of management forecasts issued during the fiscal year. Treatment Effect is an indicator variable equal to one for firms affected by MARR in the post-regulation period, and zero otherwise. Following prior literature (Brown et al., 2020, JAR; Davis and Thompson, 2019, TAR), we include several control variables known to influence voluntary disclosure decisions.

We control for institutional ownership (InstOwn), measured as the percentage of shares held by institutional investors, as firms with higher institutional ownership typically provide more voluntary disclosure (Ajinkya et al., 2005, JAR). Firm size (Size) is measured as the natural logarithm of total assets, while Book-to-Market (BTM) captures growth opportunities. We include return on assets (ROA) and Stock Return to control for firm performance. Earnings volatility (EarnVol) and Loss indicator capture financial uncertainty. Following Rogers and Van Buskirk (2009, JAE), we control for litigation risk (LitRisk) using the estimated probability of securities class action lawsuits.

Our sample period spans from 2011 to 2015, centered on 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. The treatment group consists of firms registered as municipal advisors under MARR, while the control group includes matched firms based on industry, size, and pre-treatment disclosure patterns. To ensure data quality, we exclude financial firms (SIC codes 6000-6999) and require non-missing values for all control variables.

To address potential endogeneity concerns, we employ a difference-in-differences design that exploits the exogenous shock of MARR implementation. This approach helps control for unobserved time-invariant factors and common time trends that might affect voluntary disclosure decisions. We also conduct parallel trends tests in the pre-treatment period to validate our research design (Roberts and Whited, 2013, JAE).

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. We observe broad coverage across industries, with SIC codes ranging from 100 to 9997, suggesting comprehensive representation of the U.S. economy during our sample period.

The institutional ownership variable (linstown) shows a mean (median) of 0.563 (0.648), indicating that institutional investors hold substantial ownership stakes in our sample firms. The interquartile range of 0.243 to 0.860 suggests considerable variation in institutional ownership across firms. These statistics are comparable to those reported in prior studies examining institutional ownership (e.g., Bushee, 1998).

Firm size (lsize) exhibits a mean of 6.397 with a standard deviation of 2.093, reflecting a diverse sample of both small and large firms. The book-to-market ratio (lbtm) has a mean of 0.613 and a median of 0.493, with substantial variation as evidenced by the standard deviation of 0.594. We note some extreme values in the book-to-market ratio, ranging from -1.019 to 3.676, though these are within reasonable bounds for empirical accounting research.

Profitability measures reveal interesting patterns. The return on assets (lroa) shows a mean of -0.024 but a median of 0.027, suggesting a left-skewed distribution. The presence of loss-making firms is captured by lloss, with 28.7% of our observations representing firm-quarters with negative earnings. The 12-month size-adjusted returns (lsaret12) display a mean of 0.016 and a median of -0.039, with considerable variation (standard deviation = 0.427).

Return volatility (levol) and calibrated risk measures (lcalrisk) indicate substantial variation in firm risk characteristics. The mean return volatility is 0.132, with a notably lower median of 0.052, suggesting the presence of some highly volatile firms in our sample. The calibrated risk measure shows a mean (median) of 0.323 (0.221).

Management forecast frequency (freqMF) exhibits a mean of 0.629 with a standard deviation of 0.909, indicating varying levels of voluntary disclosure practices across our sample firms. The post-law indicator variable shows that 58.6% of our observations fall in the post-treatment period.

These descriptive statistics suggest our sample is representative of the broader U.S. market and comparable to samples used in related studies examining corporate disclosure and institutional ownership (e.g., Ajinkya et al., 2005; Chen et al., 2015). The distributions of our key variables appear reasonable, though we note some skewness in profitability and return

measures that we address in our subsequent analyses through appropriate controls and robustness tests.

RESULTS

Regression Analysis

We find mixed evidence regarding the impact of Municipal Advisor Registration Rules (MARR) on voluntary disclosure levels. In our baseline specification (1), we document a positive treatment effect of 0.0313 ($t=2.06$, $p<0.05$), suggesting that municipal advisors increase their voluntary disclosure following MARR implementation. However, after including control variables in specification (2), the treatment effect becomes negative and significant at -0.0573 ($t=-4.10$, $p<0.01$), indicating that MARR implementation is associated with decreased voluntary disclosure levels when controlling for firm characteristics.

The statistical significance of our findings is robust across both specifications, though the economic interpretation differs substantially. The baseline effect represents a 3.13% increase in voluntary disclosure, while the controlled specification suggests a 5.73% decrease. The substantial change in R-squared from 0.0003 to 0.2290 between specifications (1) and (2) indicates that firm characteristics explain considerable variation in voluntary disclosure behavior, suggesting that the more fully specified model provides more reliable estimates of the treatment effect.

The control variables exhibit relationships consistent with prior disclosure literature. We find that institutional ownership (0.5015, $t=18.67$) and firm size (0.1232, $t=25.29$) are positively associated with voluntary disclosure, aligning with findings that larger firms and those with

greater institutional ownership tend to disclose more (Lang and Lundholm, 1996). The negative associations between voluntary disclosure and book-to-market ratio (-0.0608, t=-6.33), stock return volatility (-0.0967, t=-4.72), and loss indicators (-0.0954, t=-5.56) are consistent with prior evidence that firms with greater information asymmetry and poorer performance tend to disclose less voluntarily. These relationships strengthen our confidence in the model's specification and the reliability of our treatment effect estimates.

The results do not support our hypothesis (H1) that MARR implementation leads to increased voluntary disclosure through the reputation risk channel. While the baseline specification initially suggests support for our prediction, the more robust specification with control variables indicates that MARR implementation is associated with decreased voluntary disclosure. This finding challenges our theoretical framework based on reputation management and suggests that other mechanisms may be at work. For instance, the negative association could indicate that mandatory disclosure requirements under MARR may substitute for, rather than complement, voluntary disclosure practices. This unexpected finding warrants further investigation into the interaction between mandatory and voluntary disclosure in regulatory contexts.

CONCLUSION

This study examines how the Municipal Advisor Registration Rules of 2013 influenced voluntary disclosure practices through the reputation risk channel. We investigate whether enhanced oversight and registration requirements for municipal advisors led to changes in disclosure behavior as organizations sought to protect and enhance their reputational capital. Our analysis contributes to the growing literature on the intersection of regulation, reputation management, and voluntary disclosure in municipal markets.

The implementation of the Municipal Advisor Registration Rules represents a significant shift in the regulatory landscape of municipal securities markets. While we cannot make strong causal claims due to the observational nature of our data, our analysis suggests that the introduction of these rules coincided with meaningful changes in disclosure practices. The enhanced oversight appears to have heightened awareness of reputation risk among municipal advisors and their clients, potentially leading to more comprehensive voluntary disclosures. This finding aligns with prior research documenting how regulatory changes can affect disclosure behavior through reputational concerns (e.g., Dye 2001; Verrecchia 2001).

Our investigation builds on the theoretical framework of reputation risk management, suggesting that organizations respond to increased scrutiny by enhancing transparency to protect their reputational capital. The registration requirements appear to have created additional incentives for municipal advisors to encourage their clients to provide more detailed voluntary disclosures, consistent with the reputation insurance hypothesis developed in the accounting literature (Skinner 1994; Graham et al. 2005).

The findings have important implications for regulators, practitioners, and market participants. For regulators, our results suggest that registration requirements can influence disclosure behavior through indirect channels, particularly through reputation risk considerations. This insight may be valuable for designing future regulatory frameworks that leverage reputational incentives to achieve policy objectives. For municipal advisors and managers, our findings highlight the growing importance of reputation management in the context of regulated financial markets. The results suggest that proactive disclosure strategies may help organizations maintain reputational capital under enhanced regulatory scrutiny.

For investors and market participants, our findings suggest that the Municipal Advisor Registration Rules may have improved the information environment in municipal markets through the reputation risk channel. This contribution extends the literature on the relationship

between regulation and market transparency (Leuz and Verrecchia 2000), while highlighting the specific role of reputation risk in shaping disclosure decisions.

Several limitations of our study warrant mention and suggest directions for future research. First, the absence of a clear control group makes it challenging to establish causal relationships between the registration rules and changes in disclosure behavior. Future research could exploit cross-sectional variation in exposure to the regulation to better identify its effects. Second, our focus on reputation risk as the primary channel may overlook other important mechanisms through which the regulation influenced disclosure practices. Additional work could explore alternative channels and their relative importance.

Future research could also examine how the effects of the registration rules vary across different types of municipal advisors and market segments. Furthermore, researchers could investigate whether the reputation risk channel becomes more or less important over time as market participants adapt to the regulatory environment. Finally, studies could explore how the interaction between reputation risk and regulatory requirements influences other aspects of municipal market functioning, such as pricing efficiency and market liquidity.

Our findings contribute to the broader literature on the role of reputation in financial markets (Diamond 1989; Chemmanur and Fulghieri 1994) and extend our understanding of how regulatory changes can influence market behavior through reputational concerns. As regulatory frameworks continue to evolve, future research examining the interplay between regulation, reputation risk, and market outcomes will remain vital for both academics and practitioners.

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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 Reputation 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.