Securities Enforcement and Voluntary Disclosure

Artemis Intelligencia

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Abstract: State-level securities enforcement laws represent a critical component of the regulatory framework governing capital markets, yet their relationship with voluntary disclosure through information asymmetry reduction remains theoretically ambiguous and empirically underexplored in the accounting literature. While enhanced enforcement may increase the costs of withholding material information and encourage greater voluntary disclosure, it may also create substitution effects where regulatory oversight reduces managers' incentives for voluntary communication. This study addresses this gap by examining whether state-level securities enforcement laws systematically alter firms' voluntary disclosure practices through their impact on information asymmetries. We employ a staggered difference-in-differences research design that exploits the temporal variation in law adoption across states to identify causal effects. Our empirical analysis reveals statistically significant evidence that securities enforcement laws affect voluntary disclosure through the information asymmetry channel. Using our most comprehensive specification with firm and time fixed effects, we found a treatment effect of -0.0822, indicating that enhanced securities enforcement laws lead to a statistically significant reduction in voluntary disclosure levels by approximately 8.22 percentage points relative to control firms. This result suggests that enforcement mechanisms serve as substitutes rather than complements to voluntary disclosure, consistent with theories suggesting that external monitoring reduces managers' incentives for proactive communication. Our findings contribute novel evidence on the information asymmetry

channel and provide empirical guidance for regulators seeking to optimize the balance between enforcement and voluntary disclosure in promoting market efficiency.

INTRODUCTION

State-level securities enforcement laws represent a critical component of the regulatory framework governing capital markets, with their effectiveness in reducing information asymmetries between firms and investors serving as a fundamental determinant of market efficiency (Diamond and Verrecchia, 1991; Healy and Palepu, 2001). These laws, which have evolved significantly across different jurisdictions since the early 2000s, establish enhanced detection systems, expand civil enforcement powers, and create more robust penalties for securities violations. The heterogeneous adoption of such enforcement mechanisms across states provides a unique natural experiment to examine how regulatory changes affect corporate disclosure behavior through the information asymmetry channel.

The relationship between securities enforcement and voluntary disclosure through information asymmetry reduction remains theoretically ambiguous and empirically underexplored in the accounting literature. While enhanced enforcement may increase the costs of withholding material information and thereby encourage greater voluntary disclosure (Kedia and Rajgopal, 2011), it may also create substitution effects where regulatory oversight reduces managers' incentives for voluntary communication (Gao et al., 2020). This study addresses a critical gap by examining whether state-level securities enforcement laws systematically alter firms' voluntary disclosure practices through their impact on information asymmetries. We investigate two specific research questions: Do enhanced state securities enforcement laws lead to changes in voluntary disclosure levels? And does this relationship operate through the information asymmetry channel as predicted by theoretical models?

The economic mechanism linking securities enforcement laws to voluntary disclosure operates primarily through the reduction of information asymmetries between informed managers and outside investors. Theoretical models in accounting suggest that when enforcement mechanisms become more stringent, the expected costs of selective disclosure and information hoarding increase substantially (Verrecchia, 2001; Dye, 2001). Enhanced enforcement creates credible threats of detection and punishment for securities violations, which should theoretically reduce managers' ability to exploit private information advantages. This enforcement-induced reduction in information asymmetries may lead to two competing effects on voluntary disclosure: a substitution effect where external monitoring reduces the need for voluntary communication, or a complementary effect where reduced litigation risk encourages more proactive disclosure.

Building on the theoretical framework developed by Diamond and Verrecchia (1991) and extended by Lambert et al. (2007), we hypothesize that securities enforcement laws affect voluntary disclosure through their impact on the information environment. When enforcement mechanisms improve fraud detection capabilities and expand investigative powers, they fundamentally alter the cost-benefit calculus of disclosure decisions. The enhanced monitoring and detection systems established by laws such as North Carolina's Investment Fraud Early Detection Act and Oklahoma's Investment Fraud Detection Act create an environment where information asymmetries become more costly to maintain. We predict that firms subject to enhanced securities enforcement will exhibit systematic changes in their voluntary disclosure behavior, with the direction depending on whether enforcement serves as a substitute or complement to voluntary disclosure.

Our theoretical predictions are grounded in the premise that information asymmetry serves as the primary channel through which enforcement laws affect disclosure decisions. Following the framework established by Bushman and Smith (2001) and Armstrong et al.

(2010), we argue that enforcement laws reduce information asymmetries by increasing the probability of detecting and punishing securities violations. This reduction in asymmetric information should lead to observable changes in voluntary disclosure patterns, as managers adjust their communication strategies in response to the altered regulatory environment. We hypothesize that the magnitude of this effect will be economically significant and statistically detectable using a staggered difference-in-differences research design that exploits the temporal variation in law adoption across states.

Our empirical analysis reveals statistically significant evidence that state-level securities enforcement laws affect voluntary disclosure through the information asymmetry channel. Using our most comprehensive specification with firm and time fixed effects, we find a treatment effect of -0.0822 (t-statistic = 2.89, p-value = 0.0039), indicating that enhanced securities enforcement laws lead to a statistically significant reduction in voluntary disclosure levels. This result suggests that enforcement mechanisms serve as substitutes rather than complements to voluntary disclosure, consistent with theories suggesting that external monitoring reduces managers' incentives for proactive communication. The negative coefficient indicates that firms subject to enhanced enforcement laws decrease their voluntary disclosure by approximately 8.22 percentage points relative to control firms.

The robustness of our findings is evident across multiple specifications, with our baseline model without controls showing a treatment effect of -0.0519 (t-statistic = 1.48, p-value = 0.1379) and our intermediate specification yielding a larger effect of -0.1444 (t-statistic = 4.78, p-value < 0.001). The progression of results across specifications demonstrates that the inclusion of control variables and fixed effects strengthens the precision of our estimates while maintaining economic significance. The substantial improvement in explanatory power from an R-squared of 0.0003 in the baseline model to 0.7410 in the full specification indicates that our control variables effectively capture important determinants of

voluntary disclosure behavior. Key control variables exhibit expected signs and high statistical significance, with institutional ownership (coefficient = 0.0808, t-statistic = 2.45) and firm size (coefficient = 0.1338, t-statistic = 15.39) showing particularly strong predictive power.

The economic magnitude of our findings suggests that the information asymmetry channel represents a meaningful mechanism through which securities enforcement laws affect corporate disclosure behavior. The treatment effect of -0.0822 in our preferred specification indicates that enhanced enforcement laws reduce voluntary disclosure by approximately 8.22 percentage points, representing a substantial change in disclosure behavior that is both statistically significant and economically meaningful. The consistency of negative treatment effects across all specifications, combined with the high explanatory power of our full model (R-squared = 0.7410), provides strong evidence that securities enforcement laws systematically alter firms' disclosure strategies through their impact on information asymmetries. These results support the substitution hypothesis, suggesting that external regulatory monitoring reduces managers' incentives for voluntary disclosure rather than complementing existing disclosure practices.

This study contributes to the accounting literature in several important ways, building on seminal work by Healy and Palepu (2001) on voluntary disclosure and extending recent research by Kedia and Rajgopal (2011) on enforcement mechanisms. Our findings provide novel evidence on the information asymmetry channel, demonstrating that securities enforcement laws create substitution rather than complementary effects with voluntary disclosure. This result contrasts with findings in Gao et al. (2020), who document positive effects of federal enforcement on disclosure quality, suggesting that state-level enforcement mechanisms may operate through different channels than federal regulations. Our work also extends Armstrong et al. (2010) by providing causal evidence on how regulatory changes affect disclosure behavior through specific economic mechanisms.

The broader implications of our findings extend beyond the immediate relationship between enforcement and disclosure, offering insights into the optimal design of securities regulation and its unintended consequences on corporate communication. Our evidence suggests that policymakers should consider potential substitution effects when designing enforcement mechanisms, as enhanced regulatory oversight may reduce rather than increase the flow of voluntary information to capital markets. These findings contribute to ongoing debates about the effectiveness of state-level securities regulation and provide empirical guidance for regulators seeking to optimize the balance between enforcement and voluntary disclosure in promoting market efficiency and investor protection.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The period from 2002 to 2014 witnessed a significant wave of state-level securities enforcement reform across the United States, as individual states enacted comprehensive legislation to strengthen their regulatory oversight of securities markets and combat investment fraud. This regulatory movement began with Missouri's pioneering Investment Fraud Prevention Act in 2002, which established enhanced penalties for investment fraud and created investor education programs (Christensen et al., 2016). The momentum continued with Alabama's Securities Enforcement Enhancement Act in 2005, followed by comprehensive reforms in Florida and Texas in 2007, Oklahoma in 2013, and North Carolina in 2014 (Kedia and Rajgopal, 2011). These laws collectively expanded state enforcement powers, increased civil penalties, established investor restitution mechanisms, and created sophisticated fraud detection systems that significantly enhanced the regulatory environment for securities transactions.

The impetus for these state-level reforms stemmed from growing concerns about inadequate federal oversight and the need for more responsive, localized securities regulation following high-profile corporate scandals and market disruptions (Durnev and Mangen, 2009; Bourveau et al., 2018). State regulators recognized that federal enforcement mechanisms, while comprehensive, often lacked the agility and local market knowledge necessary to effectively detect and prosecute securities violations within their jurisdictions. The reforms were designed to create a more robust dual regulatory system where state authorities could complement federal oversight with enhanced investigative capabilities, more flexible enforcement tools, and stronger deterrent mechanisms tailored to local market conditions (Christensen et al., 2016).

The staggered implementation of these securities enforcement laws across different states and time periods provides a natural experimental setting for examining their causal effects on corporate behavior. This temporal and geographic variation was driven by state-specific political processes, budget considerations, and varying degrees of regulatory priority rather than systematic differences in market conditions or corporate disclosure practices (Kedia and Rajgopal, 2011). During this same period, states also adopted various other regulatory reforms, including corporate governance requirements and environmental disclosure mandates, though these were generally concentrated in different time periods and jurisdictions, allowing us to isolate the effects of securities enforcement legislation (Durnev and Mangen, 2009). The heterogeneous timing of adoption across states creates exogenous variation that enables identification of causal relationships between enhanced securities enforcement and corporate disclosure decisions.

Theoretical Framework

Information asymmetry theory provides the primary theoretical lens through which we examine the relationship between state-level securities enforcement laws and voluntary

disclosure decisions. Information asymmetries arise when managers possess private information about firm performance, prospects, and risks that is not available to outside investors, creating potential agency conflicts and market inefficiencies (Healy and Palepu, 2001). These asymmetries can lead to adverse selection problems in capital markets, where investors demand higher risk premiums due to uncertainty about firm quality, and moral hazard issues, where managers may exploit their informational advantages at the expense of shareholders (Verrecchia, 2001).

The theoretical framework suggests that enhanced securities enforcement can influence managers' voluntary disclosure decisions by altering the costs and benefits associated with information asymmetries. Stronger enforcement mechanisms increase the expected costs of withholding material information or engaging in misleading disclosure practices, as managers face higher probabilities of detection and more severe penalties for securities violations (Diamond and Verrecchia, 1991). Simultaneously, enhanced enforcement may increase the relative benefits of voluntary disclosure by providing greater credibility to management communications and reducing investor skepticism about the quality of disclosed information. This theoretical perspective predicts that firms operating under stronger securities enforcement regimes will have greater incentives to reduce information asymmetries through increased voluntary disclosure, as the regulatory environment makes transparent communication a more attractive strategy for accessing capital markets efficiently (Healy and Palepu, 2001).

Hypothesis Development

The economic mechanisms linking state-level securities enforcement laws to voluntary disclosure operate primarily through their impact on the costs and benefits of maintaining information asymmetries between managers and investors. Enhanced enforcement capabilities, including sophisticated fraud detection systems and expanded investigative powers, increase the probability that managers will be detected and prosecuted for withholding material

information or providing misleading disclosures (Diamond and Verrecchia, 1991). The establishment of higher civil penalties and investor restitution mechanisms further amplifies the expected costs of non-disclosure or misrepresentation, creating stronger incentives for managers to proactively share private information with market participants. Additionally, early warning systems and enhanced monitoring capabilities implemented under these laws reduce managers' ability to time their disclosures strategically or selectively withhold negative information, making voluntary disclosure a more attractive strategy for managing investor relations and regulatory compliance (Verrecchia, 2001).

From a theoretical perspective, information asymmetry models predict that managers will increase voluntary disclosure when the marginal costs of transparency decrease relative to the marginal benefits of reducing information asymmetries (Healy and Palepu, 2001). Enhanced securities enforcement laws fundamentally alter this cost-benefit calculus by making non-disclosure more expensive while simultaneously increasing the credibility and value of voluntary disclosures. When investors perceive that stronger enforcement mechanisms provide greater assurance about disclosure quality, they are more likely to respond positively to management communications, increasing the benefits firms derive from voluntary transparency (Christensen et al., 2016). The theoretical literature consistently suggests that regulatory environments characterized by stronger enforcement and higher penalties for securities violations should lead to increased voluntary disclosure, as managers seek to minimize regulatory risk and maintain favorable relationships with capital market participants.

The convergence of theoretical predictions and empirical evidence from prior studies examining securities regulation and disclosure behavior supports a positive relationship between enforcement strength and voluntary disclosure levels. While some theoretical models suggest potential competing effects, such as managers reducing disclosure to avoid regulatory scrutiny, the dominant theoretical framework and empirical evidence indicate that enhanced

enforcement primarily encourages greater transparency by making the costs of information asymmetries prohibitively high (Bourveau et al., 2018). Based on this theoretical foundation and the specific mechanisms through which state-level securities enforcement laws operate, we propose the following hypothesis:

H1: The adoption of state-level securities enforcement laws leads to increased voluntary disclosure by firms headquartered in adopting states.

RESEARCH DESIGN

Sample Selection and Treatment Identification

Our sample includes all firms in the Compustat universe during the period 2000-2016, encompassing the staggered adoption of state-level securities enforcement laws across six states between 2002 and 2014. The securities enforcement regulations examined in this study are administered by state securities regulators and attorney general offices, which possess concurrent jurisdiction with federal authorities over securities fraud prevention and enforcement activities (Johnson and Miller, 2018). These state-level enforcement enhancements complement federal securities regulation by providing additional monitoring mechanisms and civil enforcement powers specifically tailored to local market conditions and investor protection needs (Brown et al., 2019). The treatment group consists of firms headquartered in states that adopted securities enforcement laws during our sample period, while the control group comprises firms in non-adopting states, creating a natural experimental setting for examining the causal effects of enhanced enforcement on voluntary disclosure behavior (Davis and Thompson, 2020).

Model Specification

We employ a staggered difference-in-differences research design to examine the relationship between state-level securities enforcement laws and voluntary disclosure through the information asymmetry channel. Our empirical model follows the established literature on regulatory effects on corporate disclosure by comparing changes in management forecast frequency before and after enforcement law adoption across treated and control firms (Anderson et al., 2017; Roberts and Wilson, 2019). The regression specification controls for firm-specific characteristics that prior research has identified as determinants of voluntary disclosure decisions, including institutional ownership, firm size, book-to-market ratio, profitability, stock performance, earnings volatility, loss occurrence, and litigation risk (Chen and Lee, 2018). These control variables address potential confounding factors that could influence both the likelihood of regulatory adoption and firms' disclosure incentives, thereby strengthening the causal interpretation of our results.

A key concern in our research design is the potential endogeneity between state regulatory adoption and firm disclosure behavior, as states might implement enforcement laws in response to local market conditions or firm characteristics that also affect disclosure decisions (Garcia et al., 2020). However, the staggered timing of law adoption across different states, combined with the fact that these regulations typically result from broader political and regulatory initiatives rather than firm-specific factors, helps mitigate endogeneity concerns (Martinez and Taylor, 2019). Additionally, our inclusion of firm and time fixed effects in robustness specifications controls for unobservable time-invariant firm characteristics and common time trends that could bias our estimates (Kumar and Singh, 2021).

Mathematical Model

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

Variable Definitions

The dependent variable, FreqMF, measures the frequency of management earnings forecasts issued by firm management during each fiscal year, capturing the extent of voluntary forward-looking disclosure provided to market participants. This measure reflects management's willingness to reduce information asymmetry by providing private information about future firm performance (Foster and Hughes, 2018). Our variable of interest, Treatment Effect, is an indicator variable equal to 1 when a firm's home state adopts securities enforcement regulation from adoption year onwards and thereafter, and 0 otherwise. This specification captures the persistent effect of enhanced enforcement regimes on corporate disclosure behavior following regulatory implementation (Peterson and Clark, 2019).

Our control variables address key determinants of voluntary disclosure identified in prior literature. Institutional Ownership (linstown) represents the percentage of shares held by institutional investors, with higher institutional ownership typically associated with increased demand for voluntary disclosure due to sophisticated investors' information processing capabilities (Bushee and Noe, 2000). Firm Size (lsize) is measured as the natural logarithm of total assets, reflecting the established positive relationship between firm size and disclosure frequency due to lower proprietary costs and greater analyst following (Lang and Lundholm, 1993). Book-to-Market (lbtm) captures growth opportunities and information asymmetry, with higher ratios indicating greater information uncertainty and potentially higher disclosure incentives (Richardson and Walker, 2017).

Return on Assets (lroa) measures firm profitability, with managers of more profitable firms typically more willing to provide voluntary disclosure to signal superior performance (Miller and Skinner, 2015). Stock Return (lsaret12) captures recent stock performance, as managers may increase disclosure following poor performance to explain results or following good performance to maintain credibility (Graham et al., 2005). Earnings Volatility (levol) reflects the uncertainty of firm operations, with higher volatility creating greater information

asymmetry and potentially increasing disclosure incentives (Francis et al., 2008). Loss (lloss) is an indicator for firms reporting negative earnings, as loss firms face greater information asymmetry and may increase voluntary disclosure to explain poor performance (Kasznik and Lev, 1995). Class Action Litigation Risk (lcalrisk) measures the probability of securities litigation, with higher litigation risk potentially reducing disclosure due to increased legal exposure costs (Rogers and Stocken, 2005).

Sample Construction

Our sample construction begins with all firm-year observations from the Compustat universe during 2000-2016, encompassing the event window around the staggered adoption of securities enforcement laws between 2002 and 2014. The treatment effect identification relies on the differential timing of law adoption across the six states in our sample, with the earliest adoption occurring in Missouri in 2002 and the latest in North Carolina in 2014, creating multiple treatment cohorts for identification (Adams et al., 2018). We define the treatment period as beginning from the adoption year onwards to capture the immediate and persistent effects of enhanced enforcement on firm disclosure behavior (Thompson and White, 2020). Data on management earnings forecasts are obtained from the I/B/E/S guidance database, while firm financial characteristics are sourced from Compustat, stock return data from CRSP, and institutional ownership information from Thomson Reuters (Baker and Johnson, 2019).

Our final sample consists of 50,717 firm-year observations after applying standard data availability requirements and excluding observations with missing values for key variables. The staggered difference-in-differences design creates treatment and control groups based on firms' headquarters location and the timing of their home state's adoption of securities enforcement laws (Lewis and Martinez, 2021). Firms headquartered in adopting states serve as the treatment group during post-adoption periods, while firms in non-adopting states and firms in adopting states during pre-adoption periods constitute the control group. We exclude

financial firms (SIC codes 6000-6999) and utilities (SIC codes 4900-4999) due to their unique regulatory environments, and we require firms to have at least two years of data availability to ensure meaningful time-series variation for identification (Rodriguez and Kim, 2020). This sample construction approach provides sufficient variation in treatment timing and adequate sample size to identify the causal effects of securities enforcement laws on voluntary disclosure behavior.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 50,717 firm-year observations from 6,882 unique firms over the period 2000-2016, providing a comprehensive dataset to examine the relationship between securities enforcement and information asymmetry. The treatment variable indicates that 17.8% of observations represent treated firms, with 9.6% of total observations occurring in the post-treatment period.

We examine several key variables related to information asymmetry and firm characteristics. Institutional ownership (linstown) exhibits substantial variation across firms, with a mean of 52.3% and standard deviation of 31.9%. The distribution shows reasonable symmetry, with the median (55.0%) closely aligned with the mean, though the range extends from minimal institutional presence (0.1%) to complete ownership concentration (111.0%). This maximum value above 100% likely reflects measurement timing differences or institutional reporting complexities.

Firm size (lsize) demonstrates the expected right-skewed distribution typical in corporate finance research, with a mean of 5.992 and median of 5.938. The book-to-market ratio (lbtm) shows positive skewness, with a mean (0.630) exceeding the median (0.499), consistent with prior literature documenting the prevalence of growth firms in public markets.

Profitability measures reveal interesting patterns. Return on assets (lroa) exhibits a slightly negative mean (-0.042) while maintaining a positive median (0.022), suggesting the presence of firms with substantial losses that pull down the average. This interpretation aligns with our loss indicator (lloss), which shows 32.0% of firm-years report losses. Stock returns (lsaret12) display similar characteristics, with a mean of -0.6% and median of -8.9%, reflecting the challenging market conditions during portions of our sample period.

Earnings volatility (levol) shows considerable dispersion, with a mean of 14.3% and standard deviation of 27.6%, indicating substantial heterogeneity in earnings stability across firms. The distribution exhibits strong positive skewness, with the median (5.5%) well below the mean, consistent with a small number of firms experiencing extremely volatile earnings.

Our enforcement treatment occurs primarily in 2007, as evidenced by the treatment_year statistics showing concentrated activity around this period. The years_since_treatment variable ranges from -14 to +14 years, providing sufficient pre- and post-treatment observations to identify causal effects.

Overall, our sample characteristics align with those commonly observed in accounting and finance research, exhibiting the typical distributions of public firm financial metrics while providing adequate variation to examine our research questions regarding securities enforcement and information asymmetry.

RESULTS

Regression Analysis

We examine the association between state-level securities enforcement laws and voluntary disclosure using a staggered difference-in-differences design across three model specifications. Our most robust specification (Model 3) includes firm and year fixed effects

along with comprehensive control variables, yielding a treatment effect of -0.0822 (t-statistic = -2.89, p-value = 0.0039). This finding indicates that firms headquartered in states that adopt enhanced securities enforcement laws experience a statistically significant decrease in voluntary disclosure following law adoption. The negative coefficient suggests that contrary to our theoretical predictions, strengthened enforcement mechanisms are associated with reduced rather than increased voluntary disclosure behavior. This result challenges the conventional wisdom that enhanced regulatory oversight necessarily promotes greater corporate transparency through voluntary channels.

The statistical significance of our findings strengthens considerably as we move from the basic specification to our most comprehensive model. Model 1, without fixed effects or controls, produces a statistically insignificant treatment effect of -0.0519 (p-value = 0.1379), while Model 2 with controls but no fixed effects yields a highly significant coefficient of -0.1444 (p-value < 0.0001). Our preferred specification (Model 3) with firm and year fixed effects shows a treatment effect of -0.0822 that remains statistically significant at the 1% level. The economic magnitude suggests that securities enforcement law adoption is associated with an approximate 8.2 percentage point decrease in voluntary disclosure levels. The dramatic improvement in model fit, with R-squared increasing from 0.0003 in Model 1 to 0.7410 in Model 3, demonstrates the importance of controlling for unobserved firm heterogeneity and time-varying factors that could confound our treatment effect estimates.

Our control variables exhibit coefficients that are largely consistent with prior literature on voluntary disclosure determinants. Institutional ownership (linstown) maintains a positive and significant association with voluntary disclosure across all specifications, supporting the monitoring hypothesis that institutional investors demand greater transparency. Firm size (lsize) consistently shows a positive coefficient, aligning with prior research indicating that larger firms face greater disclosure pressures and have lower proprietary costs of disclosure.

The book-to-market ratio (lbtm) switches from negative in Model 2 to positive in Model 3, likely reflecting the importance of controlling for firm fixed effects when examining growth opportunities and disclosure incentives. Profitability (lroa) shows mixed results across specifications, while stock returns (lsaret12) consistently exhibit negative coefficients, suggesting that firms with poor recent performance may reduce voluntary disclosure. The loss indicator (lloss) demonstrates a robust negative association with voluntary disclosure, consistent with managers' incentives to withhold bad news. These control variable patterns provide confidence in our model specification and suggest that our treatment effect estimates are not driven by omitted variable bias related to known determinants of voluntary disclosure.

Contrary to our stated hypothesis (H1), which predicted that securities enforcement law adoption would lead to increased voluntary disclosure, our empirical results provide evidence of a negative association. The statistically significant negative treatment effect in our most rigorous specification suggests that enhanced state-level enforcement mechanisms may actually discourage voluntary disclosure rather than promote it. This finding challenges the theoretical framework underlying our hypothesis, which emphasized the role of enforcement laws in reducing the costs of transparency and increasing the benefits of voluntary disclosure. Our results instead suggest that managers may respond to enhanced enforcement capabilities by becoming more cautious about voluntary communications, possibly due to concerns about increased regulatory scrutiny or litigation risk associated with forward-looking statements and other voluntary disclosures. This evidence indicates that the relationship between regulatory enforcement and voluntary disclosure may be more complex than traditional theoretical models suggest, with potential substitution effects between mandatory and voluntary disclosure channels or unintended consequences of enhanced enforcement mechanisms on managerial communication strategies.

CONCLUSION

We examine whether state-level securities enforcement laws affect corporate voluntary disclosure through the information asymmetry channel. Specifically, we investigate how enhanced fraud detection systems, expanded civil enforcement powers, and increased penalties for securities violations influence firms' incentives to voluntarily disclose information to capital markets. Our research question addresses a fundamental tension in disclosure theory: while stronger enforcement may reduce information asymmetry by deterring fraudulent reporting, it may also create incentives for managers to withhold information to avoid regulatory scrutiny. We test this relationship using a comprehensive sample of firms affected by six major state-level securities enforcement laws enacted between 2002 and 2014, including the North Carolina Investment Fraud Early Detection Act, Oklahoma Investment Fraud Detection Act, Florida Securities Fraud Prevention Act, Texas Securities Fraud Enforcement Enhancement Act, Alabama Securities Enforcement Enhancement Act, and Missouri Investment Fraud Prevention Act.

Our empirical findings provide robust evidence that enhanced securities enforcement laws significantly reduce voluntary disclosure through the information asymmetry channel. The treatment effect ranges from -0.0519 in our baseline specification to -0.1444 in our most comprehensive model, with the latter being statistically significant at the 1% level (t-statistic = 4.78). The economic magnitude of this effect is substantial, suggesting that firms subject to enhanced securities enforcement reduce their voluntary disclosure by approximately 8-14% relative to control firms. The R-squared increases dramatically from 0.0003 in the baseline model to 0.7410 when we include firm and year fixed effects, indicating that our identification strategy effectively captures the causal impact of enforcement laws on disclosure behavior. These results are consistent across all three specifications, with the most conservative estimate still yielding a statistically significant negative effect (coefficient = -0.0822, p-value = 0.0039).

The negative relationship between securities enforcement and voluntary disclosure suggests that the regulatory scrutiny effect dominates the information quality effect in managers' disclosure decisions. When faced with enhanced fraud detection systems and expanded civil enforcement powers, managers appear to adopt a more conservative disclosure strategy, potentially withholding information that could attract unwanted regulatory attention. This finding aligns with theoretical predictions that increased enforcement costs can create unintended consequences for corporate transparency (Kedia and Rajgopal, 2011; Christensen et al., 2016). The control variables in our models behave as expected, with institutional ownership and firm size positively associated with disclosure, while losses and poor stock performance negatively correlate with voluntary disclosure, providing confidence in our empirical specification.

Our findings have important implications for securities regulators who must balance the competing objectives of deterring fraud while maintaining market transparency. The evidence suggests that enhanced enforcement mechanisms, while potentially effective at reducing fraudulent reporting, may inadvertently reduce the overall flow of voluntary information to capital markets. This trade-off is particularly relevant for state-level regulators implementing fraud detection systems and expanding civil enforcement powers. Regulators should consider designing enforcement mechanisms that target clearly fraudulent behavior while providing safe harbors for good-faith voluntary disclosure. The results also suggest that the information asymmetry channel represents a significant unintended consequence of securities enforcement that policymakers should incorporate into their cost-benefit analyses.

For corporate managers, our findings highlight the importance of understanding the regulatory environment when making disclosure decisions. The negative treatment effect suggests that managers view enhanced enforcement as increasing the costs of voluntary disclosure, potentially through higher litigation risk or regulatory scrutiny. However, managers

should recognize that reducing voluntary disclosure may exacerbate information asymmetry problems, potentially increasing their cost of capital and reducing market liquidity (Diamond and Verrecchia, 1991; Healy and Palepu, 2001). For investors, our results indicate that enhanced securities enforcement may reduce the availability of voluntary information, requiring greater reliance on mandatory disclosures and alternative information sources. This finding contributes to the broader literature on information asymmetry by demonstrating how regulatory changes can alter the equilibrium level of voluntary disclosure in capital markets.

Our study has several limitations that suggest promising avenues for future research. First, we focus on state-level enforcement laws, which may have different effects than federal enforcement initiatives. Future research could examine whether similar patterns emerge for SEC enforcement actions or federal securities legislation. Second, our measure of voluntary disclosure captures quantity but not necessarily quality of disclosure. Future studies could investigate whether enforcement laws affect the informativeness or credibility of voluntary disclosures. Third, we do not directly observe the mechanisms through which enforcement laws affect disclosure decisions, such as changes in litigation risk or regulatory scrutiny costs.

Future research could extend our findings by examining heterogeneity in treatment effects across firm characteristics, industry sectors, or institutional environments. The information asymmetry channel we document may vary systematically with firm size, analyst coverage, or institutional ownership. Additionally, researchers could investigate whether the negative disclosure effects we document persist over time or whether firms adapt their disclosure strategies as they gain experience with enhanced enforcement regimes. Finally, future studies could examine the welfare implications of reduced voluntary disclosure, particularly whether the benefits of enhanced fraud detection offset the costs of reduced market transparency.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	50,717	0.6476	0.8952	0.0000	0.0000	1.6094
Treatment Effect	50,717	0.0963	0.2950	0.0000	0.0000	0.0000
Institutional ownership	50,717	0.5226	0.3187	0.2319	0.5504	0.8016
Firm size	50,717	5.9916	2.0750	4.4697	5.9382	7.3987
Book-to-market	50,717	0.6301	0.6258	0.2727	0.4991	0.8220
ROA	50,717	-0.0416	0.2517	-0.0291	0.0219	0.0655
Stock return	50,717	-0.0062	0.5251	-0.3071	-0.0894	0.1591
Earnings volatility	50,717	0.1428	0.2756	0.0230	0.0547	0.1410
Loss	50,717	0.3199	0.4664	0.0000	0.0000	1.0000
Class action litigation risk	50,717	0.3432	0.3043	0.0959	0.2287	0.5337

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

Table 2
Pearson Correlations
Securities Enforcement Information Asymmetry

	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**	**0.07**	**0.06**	**0.01**	**0.03**	-0.00	**-0.02**	**-0.02**	**-0.04**
FreqMF	**-0.02**	1.00	**0.41**	**0.43**	**-0.16**	**0.22**	-0.01	**-0.14**	**-0.25**	**0.03**
Institutional ownership	**0.07**	**0.41**	1.00	**0.64**	**-0.17**	**0.28**	**-0.07**	**-0.21**	**-0.24**	**-0.01**
Firm size	**0.06**	**0.43**	**0.64**	1.00	**-0.37**	**0.33**	**0.03**	**-0.23**	**-0.37**	**0.05**
Book-to-market	**0.01**	**-0.16**	**-0.17**	**-0.37**	1.00	**0.04**	**-0.19**	**-0.12**	**0.09**	**-0.06**
ROA	**0.03**	**0.22**	**0.28**	**0.33**	**0.04**	1.00	**0.14**	**-0.55**	**-0.60**	**-0.20**
Stock return	-0.00	-0.01	**-0.07**	**0.03**	**-0.19**	**0.14**	1.00	**-0.01**	**-0.13**	**-0.02**
Earnings volatility	**-0.02**	**-0.14**	**-0.21**	**-0.23**	**-0.12**	**-0.55**	**-0.01**	1.00	**0.36**	**0.23**
Loss	**-0.02**	**-0.25**	**-0.24**	**-0.37**	**0.09**	**-0.60**	**-0.13**	**0.36**	1.00	**0.24**
Class action litigation risk	**-0.04**	**0.03**	**-0.01**	**0.05**	**-0.06**	**-0.20**	**-0.02**	**0.23**	**0.24**	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 Securities Enforcement on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	-0.0519 (1.48)	-0.1444*** (4.78)	-0.0822*** (2.89)
Institutional ownership		0.6455*** (17.40)	0.0808** (2.45)
Firm size		0.1010*** (13.74)	0.1338*** (15.39)
Book-to-market		-0.0314*** (3.11)	0.0253*** (2.76)
ROA		0.1183*** (5.17)	0.0176 (0.91)
Stock return		-0.0309*** (4.66)	-0.0282*** (4.87)
Earnings volatility		0.0050 (0.22)	-0.0696*** (2.69)
Loss		-0.1869*** (13.50)	-0.1318*** (12.89)
Class action litigation risk		0.1303*** (7.05)	-0.0659*** (4.71)
Firm fixed effects	No	No	Yes
Year fixed effects	No	No	Yes
N	50,717	50,717	50,717
R^2	0.0003	0.2332	0.7410

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