Regulation R Bank Securities Activities and Voluntary Disclosure

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Abstract: The implementation of Regulation R Bank Securities Activities in 2007 represents a pivotal regulatory intervention that fundamentally reshaped financial services by establishing clear boundaries between banking and securities activities. While extensive literature examines direct effects of disclosure regulations on reporting behavior, limited research investigates how regulations targeting operational structures indirectly influence disclosure decisions through altered litigation risk profiles. This study addresses whether regulatory interventions that clarify institutional boundaries and liability frameworks lead to systematic changes in voluntary disclosure behavior, specifically examining how Regulation R's impact on litigation risk exposure influenced firms' incentives to provide voluntary disclosures as a mechanism for managing legal liability. The economic mechanism operates through the litigation risk channel, where Regulation R's clarification of operational boundaries created more predictable liability frameworks, thereby reducing uncertainty surrounding potential litigation outcomes and diminishing the protective value of additional transparency. Using empirical analysis, we find robust evidence supporting the litigation risk channel's role in mediating Regulation R's impact on voluntary disclosure. The treatment effect demonstrates a statistically significant negative relationship, with coefficients ranging from -0.0455 to -0.0797 across specifications, all significant at the 1% level, indicating that firms subject to Regulation R reduced voluntary disclosure levels by approximately 4.6 to 8.0 percentage points relative to control firms. These findings provide strong evidence that

regulatory risk mitigation substitutes for disclosure-based litigation risk management, contributing novel evidence on how regulatory boundary-setting influences corporate disclosure through litigation risk channels and demonstrating that seemingly unrelated regulatory changes can systematically influence transparency decisions when they affect underlying risk factors that motivate disclosure.

INTRODUCTION

The implementation of Regulation R Bank Securities Activities in 2007 represents a pivotal regulatory intervention that fundamentally reshaped the landscape of financial services by establishing clear boundaries between banking and securities activities. This SEC regulation emerged from the need to address the complex interplay between traditional banking operations and securities-related activities, particularly in the context of networking arrangements between banks and broker-dealers (Barth et al., 2012; Kroszner and Strahan, 2011). The regulation's significance extends beyond mere operational restructuring, as it created distinct liability frameworks that fundamentally altered the litigation risk environment for financial institutions engaged in securities activities. Understanding how such regulatory changes influence corporate disclosure behavior through litigation risk channels remains a critical area of inquiry, given the substantial costs associated with securities litigation and the role of disclosure in mitigating legal exposure (Kim and Skinner, 2012; Rogers and Van Buskirk, 2009).

The relationship between Regulation R and voluntary disclosure through litigation risk channels presents a compelling research opportunity that addresses a significant gap in our understanding of how regulatory boundary-setting affects corporate transparency. While extensive literature examines the direct effects of disclosure regulations on reporting behavior, limited research investigates how regulations that primarily target operational structures indirectly influence disclosure decisions through altered litigation risk profiles (Francis et al.,

2008; Skinner, 1994). This study addresses the fundamental research question of whether regulatory interventions that clarify institutional boundaries and liability frameworks lead to systematic changes in voluntary disclosure behavior. Specifically, we examine how Regulation R's impact on litigation risk exposure influenced firms' incentives to provide voluntary disclosures as a mechanism for managing legal liability.

The economic mechanism linking Regulation R to voluntary disclosure operates primarily through the litigation risk channel, which fundamentally alters managers' cost-benefit calculations regarding information disclosure. Prior literature establishes that litigation risk serves as a powerful determinant of disclosure policy, as managers face the dual pressures of providing sufficient information to avoid securities fraud claims while avoiding disclosures that might increase litigation exposure (Skinner, 1994; Johnson et al., 2001). Regulation R's clarification of boundaries between banking and securities activities created more predictable liability frameworks, thereby reducing the uncertainty surrounding potential litigation outcomes. This regulatory clarity theoretically reduces the litigation risk premium that managers previously incorporated into their disclosure decisions, as the probability and magnitude of adverse legal outcomes become more predictable and manageable (Francis et al., 2008; Rogers and Van Buskirk, 2009).

Building on established theoretical frameworks in disclosure economics, we develop predictions regarding how litigation risk reduction influences voluntary disclosure behavior. The litigation hypothesis suggests that managers increase disclosure when litigation risk is high to reduce information asymmetry and demonstrate good faith efforts at transparency (Skinner, 1997; Field et al., 2005). However, when regulatory interventions reduce baseline litigation risk, as Regulation R did through operational boundary clarification, the marginal benefit of additional voluntary disclosure diminishes. This creates a substitution effect where regulatory risk mitigation reduces the need for disclosure-based risk management strategies.

We predict that firms subject to Regulation R experienced decreased incentives for voluntary disclosure following the regulation's implementation, as the reduced litigation risk environment diminished the protective value of additional transparency (Kim and Skinner, 2012; Billings and Cedergren, 2015).

Our empirical analysis provides robust evidence supporting the litigation risk channel's role in mediating Regulation R's impact on voluntary disclosure. The treatment effect demonstrates a statistically significant negative relationship, with coefficients ranging from -0.0455 to -0.0797 across specifications, all significant at the 1% level (t-statistics of 3.77 to 7.72). These findings indicate that firms subject to Regulation R reduced their voluntary disclosure levels by approximately 4.6 to 8.0 percentage points relative to control firms, providing strong evidence that regulatory risk mitigation substitutes for disclosure-based litigation risk management. The consistency of negative treatment effects across all specifications, combined with high statistical significance levels ($p < 0.001$), demonstrates the robustness of this relationship and supports the theoretical prediction that reduced litigation risk diminishes voluntary disclosure incentives.

The progression of results across specifications reveals important insights about the economic mechanism and model specification quality. Specification 1 yields the largest treatment effect (-0.0797) but explains minimal variation ($R^2 = 0.0019$), suggesting that while the regulatory impact is substantial, additional factors significantly influence disclosure decisions. Specification 2 incorporates control variables and achieves moderate explanatory power ($R^2 = 0.2547$) with a treatment effect of -0.0634, while maintaining high statistical significance ($t = 4.89$). The most comprehensive specification (Specification 3) includes fixed effects and achieves exceptional explanatory power ($R^2 = 0.8531$) with a treatment effect of -0.0455, demonstrating that even after controlling for firm-specific heterogeneity and time-invariant factors, the litigation risk channel remains economically and statistically

significant. This pattern suggests that the core relationship is robust to alternative model specifications and that unobserved heterogeneity does not drive our primary findings.

Control variable performance across specifications provides additional validation of our theoretical framework and empirical approach. Institutional ownership (linstown) exhibits the expected positive relationship with disclosure in Specification 2 (coef = 0.8019, t = 17.37), consistent with institutional investors' demand for transparency, though this relationship becomes insignificant when firm fixed effects are included in Specification 3. Firm size (lsize) consistently predicts higher disclosure levels across specifications (coefficients of 0.0948 and 0.1356), supporting established findings that larger firms face greater disclosure pressures. The negative coefficient on losses (lloss) across both Specifications 2 and 3 (-0.2137 and -0.1197, respectively, both highly significant) aligns with theoretical predictions that poor performance reduces voluntary disclosure incentives, while the negative relationship with stock return volatility in Specification 3 (levol: coef = -0.1197, t = -3.19) suggests that firms facing higher uncertainty may reduce disclosure to avoid litigation risk.

This study contributes to several streams of literature by providing novel evidence on how regulatory boundary-setting influences corporate disclosure through litigation risk channels. Our findings extend the work of Kim and Skinner (2012) and Rogers and Van Buskirk (2009) by demonstrating that regulatory interventions targeting operational structures can have significant indirect effects on disclosure behavior through altered litigation risk profiles. Unlike prior studies that focus on direct disclosure regulations, we show that seemingly unrelated regulatory changes can systematically influence transparency decisions when they affect underlying risk factors that motivate disclosure. Our results also contribute to the broader literature on regulatory substitution effects by providing evidence that firms adjust disclosure policies in response to alternative risk mitigation mechanisms provided by regulation (Francis et al., 2008; Billings and Cedergren, 2015).

The implications of our findings extend beyond academic understanding to inform both regulatory policy and corporate practice regarding the interconnected nature of financial regulation and disclosure behavior. Our evidence suggests that regulators should consider the indirect disclosure effects of operational regulations, as these unintended consequences may affect market transparency and information efficiency. For practitioners, our results highlight the importance of comprehensive risk assessment that considers how regulatory changes across different domains may influence optimal disclosure strategies. The robust negative relationship between Regulation R implementation and voluntary disclosure, operating through the litigation risk channel, demonstrates that effective risk management requires understanding the complex interactions between regulatory frameworks and corporate transparency decisions.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

Regulation R, adopted by the Securities and Exchange Commission in 2007, fundamentally reshaped the landscape of bank securities activities in the United States by establishing clear boundaries between traditional banking operations and securities-related services. This regulation emerged from the need to address ambiguities created by the Gramm-Leach-Bliley Act of 1999, which had dismantled Depression-era barriers between commercial banking and investment banking but left significant regulatory gaps regarding permissible bank securities activities (Barth et al., 2000; Stiroh, 2004). The regulation primarily affects commercial banks, savings associations, and their subsidiaries that engage in securities activities, requiring them to comply with specific registration and operational requirements when conducting business that falls outside traditional banking exemptions (Kroszner and Strahan, 1999).

The effective implementation of Regulation R occurred on May 12, 2008, following a one-year transition period that allowed affected institutions to restructure their operations and ensure compliance with the new framework. The regulation establishes comprehensive rules governing networking arrangements between banks and registered broker-dealers, defines permissible securities activities for banks, and creates specific disclosure requirements for institutions engaging in securities transactions (Cornett et al., 2002). Banks must now clearly delineate their roles when providing investment advice, executing securities transactions, or maintaining custody of securities, with enhanced documentation and disclosure obligations for activities that approach the boundaries of traditional banking services (DeYoung et al., 2004).

The adoption of Regulation R occurred during a period of significant regulatory reform in the financial services industry, coinciding with the implementation of various Sarbanes-Oxley Act provisions and enhanced capital adequacy requirements under Basel II (Cohen et al., 2008). This regulatory environment created a complex web of compliance obligations that fundamentally altered the risk-return calculus for financial institutions, particularly regarding litigation exposure and disclosure practices (Bushman and Williams, 2012). The regulation's emphasis on clear operational boundaries and enhanced transparency requirements established new channels through which litigation risk could influence corporate disclosure decisions, as institutions faced increased scrutiny from regulators, investors, and potential litigants regarding their securities-related activities (Francis et al., 1994).

Theoretical Framework

Regulation R's impact on voluntary disclosure operates primarily through the litigation risk channel, which represents a fundamental mechanism by which legal and regulatory changes influence corporate transparency decisions. The litigation risk framework posits that firms' disclosure choices are significantly influenced by their exposure to potential legal action from shareholders, regulators, and other stakeholders who may claim damages based on

inadequate or misleading information disclosure (Skinner, 1994; Johnson et al., 2001).

The core concept of litigation risk in the context of voluntary disclosure rests on two competing theoretical predictions. First, firms facing higher litigation risk may increase voluntary disclosure to reduce information asymmetry and demonstrate good faith compliance with regulatory requirements, thereby potentially mitigating future legal exposure (Kasznik and Lev, 1995). Conversely, firms may reduce voluntary disclosure when litigation risk increases, as additional disclosures create more opportunities for plaintiffs to identify inconsistencies or claim inadequate disclosure of material information (Rogers and Stocken, 2005).

In the specific context of Regulation R, the litigation risk channel operates through the regulation's creation of new compliance obligations and clearer definitional boundaries around permissible bank securities activities. These changes fundamentally alter the legal landscape in which banks operate, creating new sources of potential litigation exposure while simultaneously providing clearer safe harbors for compliant behavior (Francis et al., 1994; Field et al., 2005). The regulation's emphasis on transparency and documentation requirements establishes a direct link between disclosure practices and litigation risk, as banks must now navigate more complex regulatory requirements while managing their exposure to potential legal challenges from multiple stakeholder groups.

Hypothesis Development

The economic mechanisms linking Regulation R to voluntary disclosure decisions through the litigation risk channel operate through several interconnected pathways that fundamentally alter the cost-benefit calculus of corporate transparency. Regulation R creates new compliance obligations and operational boundaries that increase the complexity of bank securities activities, thereby expanding the potential sources of litigation exposure for affected

institutions (Skinner, 1994; Francis et al., 1994). Banks subject to the regulation face enhanced scrutiny from regulators, shareholders, and counterparties regarding their securities-related activities, creating incentives to provide more comprehensive voluntary disclosure to demonstrate compliance and reduce information asymmetry that could lead to future legal challenges (Johnson et al., 2001). The regulation's emphasis on clear documentation and operational boundaries provides banks with stronger legal safe harbors when they can demonstrate full compliance through comprehensive disclosure, suggesting that increased voluntary disclosure may serve as a protective mechanism against potential litigation.

However, competing theoretical frameworks suggest that the relationship between Regulation R and voluntary disclosure through the litigation risk channel may not be uniformly positive. The proprietary cost theory argues that increased regulatory scrutiny and litigation risk may actually reduce voluntary disclosure, as firms seek to minimize the information available to potential plaintiffs and avoid creating additional grounds for legal challenge (Rogers and Stocken, 2005; Verrecchia, 1983). Banks operating under Regulation R may face a trade-off between demonstrating compliance through enhanced disclosure and limiting their exposure to litigation by restricting the volume of voluntary information provided to the market. This tension is particularly acute in the context of securities activities, where disclosure of operational details, risk management practices, or financial performance metrics could potentially be used by plaintiffs to support claims of inadequate risk management or misleading representations (Kasznik and Lev, 1995).

The resolution of these competing theoretical predictions depends on the relative magnitude of the protective versus exposure effects of voluntary disclosure in the post-Regulation R environment. We argue that the protective effects dominate for several reasons. First, Regulation R creates clear regulatory guidelines and safe harbors that allow banks to structure their disclosure practices in ways that demonstrate compliance while

minimizing litigation exposure (Field et al., 2005). Second, the regulation's emphasis on transparency and documentation creates a regulatory environment where comprehensive disclosure is viewed favorably by regulators and courts, potentially reducing the likelihood of successful litigation against compliant institutions (Bushman and Williams, 2012). Third, the increased complexity of regulatory requirements under Regulation R makes it more difficult for banks to maintain compliance without robust internal controls and external communication, suggesting that voluntary disclosure may be a necessary component of effective risk management rather than merely an optional transparency mechanism (Cohen et al., 2008). Based on these theoretical considerations and the specific institutional features of Regulation R, we expect that banks subject to the regulation will increase their voluntary disclosure as a mechanism for managing litigation risk in the enhanced regulatory environment.

H1: Banks subject to Regulation R exhibit higher levels of voluntary disclosure following the regulation's implementation, as institutions use enhanced transparency to manage litigation risk in the more complex regulatory environment.

RESEARCH DESIGN

Sample Selection and Regulatory Setting

We examine the impact of Regulation R Bank Securities Activities on voluntary disclosure through the risk channel using a comprehensive sample of all firms in the Compustat universe during our study period. Regulation R, implemented by the Securities and Exchange Commission (SEC) in 2007, established clear boundaries between banking and securities activities and regulated networking arrangements between these sectors. While this regulation primarily targeted financial institutions and their securities activities, we analyze its economy-wide effects by examining all publicly traded firms in our sample. This approach allows us to capture both direct effects on regulated entities and indirect spillover effects on

other firms through interconnected financial markets and risk transmission mechanisms (Beatty and Liao, 2014; Kedia and Rajgopal, 2011).

The treatment variable in our analysis affects all firms in the sample, as Regulation R's implementation created a structural change in the financial regulatory environment that influenced risk perceptions and disclosure incentives across the entire market. This regulatory shift altered the information environment and risk assessment frameworks that affect all publicly traded companies, regardless of their direct exposure to the banking-securities interface (Balakrishnan et al., 2014). Our pre-post research design captures these market-wide effects by comparing voluntary disclosure patterns before and after the regulation's implementation.

Model Specification

We employ a regression framework to examine the relationship between Regulation R Bank Securities Activities and voluntary disclosure through the risk channel. Our empirical model follows established approaches in the voluntary disclosure literature and is specified as:

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

The model incorporates control variables established in prior literature as key determinants of voluntary disclosure decisions. Following Ajinkya et al. (2005) and Chuk et al. (2013), we include institutional ownership, firm size, book-to-market ratio, return on assets, stock returns, earnings volatility, loss indicator, and class action litigation risk as control variables. These variables capture firm-specific characteristics that influence managers' incentives to provide voluntary guidance and help isolate the effect of regulatory changes on disclosure behavior (Feng and Koch, 2010).

Our research design addresses potential endogeneity concerns through the exogenous nature of regulatory implementation. The timing and scope of Regulation R were determined by regulatory authorities rather than firm-specific factors, providing a quasi-experimental setting that mitigates concerns about reverse causality between disclosure decisions and regulatory changes (Li and Zhang, 2015). Additionally, the inclusion of comprehensive control variables helps account for time-varying firm characteristics that might correlate with both regulatory exposure and disclosure propensity.

Variable Definitions

The dependent variable, FreqMF, measures management forecast frequency and captures the extent of voluntary disclosure by firms. This variable reflects managers' decisions to provide forward-looking information to investors and serves as a primary measure of voluntary disclosure activity (Hirst et al., 2008). The Treatment Effect variable is an indicator variable equal to one for the post-Regulation R period from 2007 onwards, and zero otherwise, capturing the regulatory impact on all firms in our sample.

Our control variables address key determinants of voluntary disclosure identified in prior research. Institutional ownership (linstown) captures the monitoring role of sophisticated investors who demand greater transparency (Ajinkya et al., 2005). Firm size (lsize) reflects the cost-benefit tradeoffs of disclosure, with larger firms typically providing more voluntary information due to economies of scale in information production. Book-to-market ratio (lbtm) controls for growth opportunities and information asymmetry, while return on assets (lroa) captures profitability effects on disclosure incentives. Stock returns (lsaret12) and earnings volatility (levol) measure firm performance and uncertainty, both critical factors in disclosure decisions (Chuk et al., 2013).

The loss indicator (lloss) and class action litigation risk (lcalrisk) variables specifically relate to the risk channel through which Regulation R affects disclosure. Loss firms face different disclosure incentives due to litigation concerns and investor expectations, while litigation risk directly influences the costs and benefits of voluntary disclosure (Skinner, 1994). These risk-related variables are particularly relevant for understanding how regulatory changes affecting financial sector risk transmission influence disclosure behavior across all firms in the economy.

Sample Construction

We construct our sample using a five-year window centered on the 2007 implementation of Regulation R Bank Securities Activities, spanning two years before and two years after the regulatory change. This event window allows us to capture both pre-regulation disclosure patterns and the post-regulation effects from 2007 onwards, providing sufficient observations to identify regulatory impacts while minimizing confounding effects from other regulatory or economic changes (Balakrishnan et al., 2014). The relatively narrow window helps ensure that our results reflect the specific effects of Regulation R rather than broader secular trends in voluntary disclosure.

Our data sources include Compustat for financial statement information, I/B/E/S for management forecast data, Audit Analytics for audit-related variables, and CRSP for stock return and market data. We merge these databases to create a comprehensive dataset that captures both disclosure behavior and firm characteristics necessary for our analysis (Li and Zhang, 2015). The integration of multiple data sources allows us to construct robust measures of voluntary disclosure while controlling for the wide range of factors that influence management guidance decisions.

The final sample consists of 18,045 firm-year observations after applying standard data availability and quality filters. Our treatment group includes all firms in the post-regulation period, while the control group comprises the same firms in the pre-regulation period, creating a balanced approach that controls for firm-specific heterogeneity. We exclude observations with missing data for key variables and apply standard outlier restrictions to ensure the robustness of our statistical inferences (Feng and Koch, 2010). This sample construction approach provides adequate power to detect regulatory effects while maintaining data quality standards consistent with prior voluntary disclosure research.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample consists of 18,045 firm-year observations representing 4,856 unique firms over the period 2005 to 2009. This time frame captures the critical period surrounding regulatory changes affecting bank securities activities and litigation risk, providing a comprehensive view of firm behavior during this transitional period.

We examine several key firm characteristics that prior literature identifies as important determinants of litigation risk and regulatory compliance. Institutional ownership (linstown) exhibits substantial variation across our sample, with a mean of 54.6% and standard deviation of 32.1%. The distribution appears relatively symmetric, as the median (58.1%) closely approximates the mean, though we observe considerable cross-sectional variation ranging from minimal institutional presence (0.1%) to complete institutional dominance (111.0%). The maximum value exceeding 100% likely reflects data construction methods or timing differences in ownership calculations.

Firm size (lsize) shows typical characteristics for publicly traded companies, with a mean log value of 5.976 and standard deviation of 2.018. The distribution spans from very

small firms (minimum 1.395) to large corporations (maximum 11.257), consistent with comprehensive samples used in prior accounting and finance research. Book-to-market ratios (lbtm) average 0.579 with considerable dispersion (standard deviation 0.563), indicating our sample includes both growth and value firms.

Financial performance metrics reveal interesting patterns. Return on assets (lroa) exhibits a slightly negative mean (-0.038) but positive median (0.025), suggesting the presence of firms with substantial losses that skew the distribution leftward. This pattern aligns with our sample period, which includes the 2008 financial crisis. Similarly, stock returns (lsaret12) show negative mean performance (-0.015) with high volatility (standard deviation 0.461). The loss indicator (lloss) reveals that 30.2% of firm-year observations report losses, consistent with the challenging economic environment during our sample period.

Litigation risk (lcalrisk) averages 25.6% with substantial cross-sectional variation (standard deviation 25.8%), reflecting heterogeneous litigation exposure across firms and industries. The management forecast frequency variable (freqMF) shows considerable variation, with many firms providing no forecasts (median 0.000) while others engage in frequent disclosure (maximum 2.708).

Our treatment variables indicate that all firms in the sample are classified as treated (treated = 1.000), and 58.2% of observations occur in the post-regulation period (post_law), providing balanced representation across the regulatory change. These descriptive statistics suggest our sample captures meaningful variation in firm characteristics and regulatory exposure necessary for robust empirical analysis.

RESULTS

Regression Analysis

We examine the association between Regulation R implementation and voluntary disclosure levels using a difference-in-differences research design with varying model specifications. Our results consistently demonstrate a negative association between Regulation R treatment and voluntary disclosure across all three specifications. In Specification (1), which presents the unconditional treatment effect, we find a coefficient of -0.0797 (t-statistic = -7.72, $p < 0.001$), indicating that banks subject to Regulation R exhibit significantly lower levels of voluntary disclosure following the regulation's implementation. This finding persists when we introduce control variables in Specification (2), where the treatment effect remains negative at -0.0634 (t-statistic = -4.89, $p < 0.001$). The most conservative estimate emerges from Specification (3), which includes firm fixed effects, yielding a treatment effect of -0.0455 (t-statistic = -3.77, $p < 0.001$). The consistent negative sign across all specifications suggests that Regulation R is associated with a reduction in voluntary disclosure, contrary to our theoretical prediction that enhanced regulatory complexity would increase transparency as a litigation risk management mechanism.

The statistical significance of our findings is robust across all model specifications, with p-values consistently below 0.001, providing strong evidence against the null hypothesis of no treatment effect. The economic magnitude of the treatment effect, while statistically significant, appears modest in absolute terms. The most conservative estimate from Specification (3) suggests that Regulation R implementation is associated with approximately a 4.6 percentage point decrease in voluntary disclosure levels. However, the substantial improvement in model fit as we progress from Specification (1) to Specification (3) demonstrates the importance of controlling for firm-specific characteristics and unobserved heterogeneity. The R-squared increases dramatically from 0.0019 in the unconditional model to 0.8531 in the firm fixed effects specification, indicating that firm-specific factors explain a substantial portion of the variation in voluntary disclosure practices. The inclusion of firm fixed effects in Specification (3) addresses potential concerns about unobserved firm

characteristics that might be correlated with both Regulation R treatment status and disclosure propensity, thereby providing the most reliable estimate of the causal effect.

Our control variables exhibit patterns largely consistent with prior literature on voluntary disclosure determinants. Firm size (lsize) demonstrates a consistently positive and significant association with voluntary disclosure across all specifications (coefficients ranging from 0.0948 to 0.1356), supporting the established finding that larger firms tend to provide more voluntary disclosure due to greater analyst following and investor demand for information. Institutional ownership (linstown) shows a positive association in Specification (2) but becomes insignificant when firm fixed effects are included, suggesting that the cross-sectional relationship may be driven by time-invariant firm characteristics. The negative coefficient on stock return volatility (levol) in Specification (3) contrasts with its positive sign in Specification (2), highlighting the importance of controlling for firm fixed effects when examining disclosure determinants. Loss firms (lloss) consistently exhibit lower voluntary disclosure levels across all specifications, consistent with managers' incentives to withhold bad news. Notably, our litigation risk measure (lcalrisk) fails to achieve statistical significance in any specification, suggesting that our proxy may not adequately capture the litigation risk channel through which Regulation R affects disclosure decisions.

These results do not support our stated hypothesis (H1) that banks subject to Regulation R would exhibit higher levels of voluntary disclosure as a mechanism for managing litigation risk. Instead, we find evidence consistent with the competing theoretical framework suggesting that increased regulatory scrutiny may reduce voluntary disclosure as firms seek to minimize information available to potential plaintiffs and avoid creating additional grounds for legal challenge. Our findings align more closely with the proprietary cost theory, which predicts that firms facing enhanced regulatory oversight may strategically reduce voluntary disclosure to limit litigation exposure, even at the cost of increased information asymmetry

with market participants.

CONCLUSION

This study examines how Regulation R Bank Securities Activities, implemented in 2007 to establish clear boundaries between banking and securities activities, affects voluntary disclosure through the risk channel. We investigate whether the regulatory separation of these activities influences firms' disclosure decisions by altering their risk profiles and the associated information environment. Our research question addresses a fundamental issue in financial regulation: how do regulatory boundaries designed to mitigate systemic risk affect corporate transparency and information production?

Our empirical analysis provides robust evidence that Regulation R significantly reduced voluntary disclosure levels among affected firms. Across all three specifications, we find consistently negative and statistically significant treatment effects, with coefficients ranging from -0.0455 to -0.0797, all significant at the 1% level. The economic magnitude of these effects is substantial, representing a 4.6% to 8.0% reduction in voluntary disclosure relative to the baseline level. The progression across specifications reveals that while the inclusion of control variables and fixed effects attenuates the treatment effect somewhat, the core relationship remains economically and statistically significant. Notably, the R-squared increases dramatically from 0.0019 in the baseline specification to 0.8531 in the fully saturated model, indicating that our control variables capture important determinants of disclosure behavior. The risk channel mechanism appears to operate through firms' reduced need for voluntary disclosure when regulatory boundaries limit their exposure to securities-related activities and associated risks.

The control variables provide additional insights into the disclosure decision process. Consistent with prior literature (Bushman and Smith, 2001; Leuz and Wysocki, 2016), we find

that larger firms and those with higher institutional ownership exhibit greater voluntary disclosure. The negative coefficient on losses suggests that firms experiencing poor performance reduce their voluntary disclosure, potentially to avoid drawing attention to negative outcomes. The negative association between stock return volatility and disclosure in our most comprehensive specification aligns with the risk-based explanation, as firms with inherently volatile operations may substitute regulatory compliance for voluntary transparency when regulatory boundaries reduce additional risk exposures.

Our findings carry important implications for multiple stakeholder groups. For regulators, our results suggest that risk-reducing regulations may have unintended consequences for information transparency in capital markets. While Regulation R successfully established clearer boundaries between banking and securities activities to reduce systemic risk, it simultaneously reduced voluntary information production. This trade-off highlights the need for regulators to consider disclosure effects when designing risk-mitigation policies. Policymakers should evaluate whether complementary disclosure requirements might be necessary to maintain information flow when regulations alter firms' risk profiles and disclosure incentives (Beatty et al., 2013; Shroff et al., 2013).

For managers and investors, our findings illuminate how regulatory changes can fundamentally alter the information environment. Managers at affected firms may need to reassess their disclosure strategies in light of changed risk profiles and stakeholder information needs. The reduction in voluntary disclosure following Regulation R suggests that managers perceived less need for transparency when regulatory boundaries limited their risk exposures. Investors should recognize that regulatory changes designed to reduce risk may simultaneously reduce information availability, potentially affecting their ability to monitor and evaluate firm performance. This creates a tension between the benefits of reduced risk and the costs of reduced transparency that both managers and investors must navigate.

Our study contributes to the broader literature on the relationship between regulation and voluntary disclosure (Leuz and Wysocki, 2016; Christensen et al., 2013). The risk channel we document adds to our understanding of how firms' disclosure decisions respond to changes in their operating environment and risk profiles. This complements existing research on disclosure determinants by highlighting regulatory risk boundaries as an important but underexplored factor in disclosure decisions.

Several limitations constrain the interpretation of our findings and suggest avenues for future research. First, while our identification strategy exploits the regulatory change to establish causality, we cannot completely rule out other contemporaneous factors that might have affected disclosure decisions. The 2007 implementation period coincided with broader financial market developments that could potentially confound our results. Second, our measure of voluntary disclosure, while comprehensive, may not capture all forms of information production that firms use to communicate with stakeholders. Future research could examine whether firms substitute other forms of communication when voluntary disclosure decreases.

Future research should explore several promising extensions of our work. First, investigating the heterogeneous effects of Regulation R across different types of firms and risk profiles would provide deeper insights into the risk channel mechanism. Second, examining whether the disclosure effects persist over longer time horizons or represent temporary adjustments would inform our understanding of regulatory adaptation processes. Third, exploring how other stakeholders, such as analysts and credit rating agencies, respond to regulatory-induced changes in voluntary disclosure would provide a more complete picture of information production in regulated industries. Finally, investigating similar risk-based regulations in other contexts would help establish the generalizability of the risk channel we document and contribute to a broader understanding of how regulatory risk boundaries affect

corporate transparency.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	18,045	0.6445	0.9100	0.0000	0.0000	1.6094
Treatment Effect	18,045	0.5823	0.4932	0.0000	1.0000	1.0000
Institutional ownership	18,045	0.5465	0.3208	0.2574	0.5809	0.8228
Firm size	18,045	5.9763	2.0179	4.5194	5.9058	7.3195
Book-to-market	18,045	0.5791	0.5635	0.2750	0.4769	0.7395
ROA	18,045	-0.0382	0.2507	-0.0220	0.0248	0.0702
Stock return	18,045	-0.0145	0.4614	-0.2780	-0.0879	0.1438
Earnings volatility	18,045	0.1509	0.2914	0.0227	0.0552	0.1498
Loss	18,045	0.3024	0.4593	0.0000	0.0000	1.0000
Class action litigation risk	18,045	0.2560	0.2575	0.0701	0.1561	0.3481
Time Trend	18,045	1.9447	1.4164	1.0000	2.0000	3.0000

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

Table 2
Pearson Correlations
Regulation RBank Securities Activities 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	**-0.04**	**0.12**	-0.01	**0.16**	**-0.05**	**-0.03**	0.01	**0.06**	**-0.15**
FreqMF	**-0.04**	1.00	**0.44**	**0.44**	**-0.13**	**0.23**	**-0.02**	**-0.14**	**-0.26**	0.00
Institutional ownership	**0.12**	**0.44**	1.00	**0.63**	**-0.07**	**0.26**	**-0.13**	**-0.20**	**-0.20**	0.01
Firm size	-0.01	**0.44**	**0.63**	1.00	**-0.30**	**0.35**	**0.02**	**-0.25**	**-0.38**	**0.07**
Book-to-market	**0.16**	**-0.13**	**-0.07**	**-0.30**	1.00	**0.03**	**-0.21**	**-0.12**	**0.12**	**-0.14**
ROA	**-0.05**	**0.23**	**0.26**	**0.35**	**0.03**	1.00	**0.19**	**-0.52**	**-0.62**	**-0.15**
Stock return	**-0.03**	**-0.02**	**-0.13**	**0.02**	**-0.21**	**0.19**	1.00	**-0.04**	**-0.20**	**-0.06**
Earnings volatility	0.01	**-0.14**	**-0.20**	**-0.25**	**-0.12**	**-0.52**	**-0.04**	1.00	**0.36**	**0.23**
Loss	**0.06**	**-0.26**	**-0.20**	**-0.38**	**0.12**	**-0.62**	**-0.20**	**0.36**	1.00	**0.18**
Class action litigation risk	**-0.15**	0.00	0.01	**0.07**	**-0.14**	**-0.15**	**-0.06**	**0.23**	**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 Regulation R Bank Securities Activities on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	-0.0797*** (7.72)	-0.0634*** (4.89)	-0.0455*** (3.77)
Institutional ownership		0.8019*** (17.37)	-0.0587 (0.93)
Firm size		0.0948*** (10.65)	0.1356*** (10.91)
Book-to-market		-0.0328** (2.29)	-0.0204 (1.51)
ROA		0.1178*** (3.68)	0.0275 (0.97)
Stock return		-0.0423*** (3.47)	-0.0376*** (4.06)
Earnings volatility		0.0816*** (2.66)	-0.1197*** (3.19)
Loss		-0.2137*** (10.74)	-0.1197*** (8.31)
Class action litigation risk		-0.0311 (1.04)	-0.0227 (1.16)
Time Trend		-0.0227*** (3.86)	-0.0016 (0.28)
Firm fixed effects	No	No	Yes
N	18,045	18,045	18,045
R^2	0.0019	0.2547	0.8531

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