Regulation R Bank Securities Activities and Voluntary Disclosure

Artemis Intelligencia

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Abstract: The implementation of Regulation R Bank Securities Activities in 2007 represents a pivotal moment in financial regulation, fundamentally reshaping bank securities activities and creating new boundaries between traditional banking operations and securities activities. This regulatory shift created unprecedented challenges for financial institutions in managing reputational capital, yet existing literature provides limited insight into how such regulatory changes influence voluntary disclosure decisions through reputation risk channels. We address this gap by examining whether Regulation R's implementation led to systematic changes in voluntary disclosure practices as banks sought to manage reputation risk in the new regulatory landscape. The economic mechanism linking Regulation R to voluntary disclosure operates through reputation risk management, where regulatory constraints create competing pressures: the need to maintain reputation through transparency versus the desire to limit regulatory exposure through reduced disclosure. Building on signaling theory and proprietary costs theory, we develop hypotheses that Regulation R's impact depends critically on whether reputation benefits outweigh proprietary costs in banks' disclosure decisions. Our empirical analysis reveals a statistically significant negative relationship between Regulation R implementation and voluntary disclosure, with treatment effects ranging from -0.0455 to -0.0797 across specifications, all significant at the 1% level. Banks subject to Regulation R reduced voluntary disclosure by approximately 4.6 to 7.9 percentage points relative to unaffected institutions, suggesting that proprietary costs and regulatory scrutiny concerns

dominated reputation risk considerations. These findings challenge conventional wisdom about reputation risk driving increased disclosure and contribute to literature on financial regulation and corporate transparency by demonstrating that regulatory complexity may create disclosure disincentives that outweigh reputation benefits.

INTRODUCTION

The implementation of Regulation R Bank Securities Activities in 2007 represents a pivotal moment in the evolution of financial regulation, fundamentally reshaping the landscape of bank securities activities and networking arrangements. This Securities and Exchange Commission regulation established clear boundaries between traditional banking operations and securities activities, creating a new regulatory framework that significantly altered how financial institutions manage their business operations and stakeholder relationships (Barth et al., 2012; Stiroh, 2004). The regulation's impact extends beyond operational compliance, fundamentally affecting how banks communicate with stakeholders and manage their public image in an increasingly complex regulatory environment.

The intersection of Regulation R with voluntary disclosure practices presents a particularly compelling avenue for investigation, especially through the lens of reputation risk management. As banks faced new constraints on their securities activities, they simultaneously confronted heightened scrutiny from regulators, investors, and the public regarding their risk management practices and operational transparency (Beatty and Liao, 2014; Bushman and Williams, 2012). This regulatory shift created unprecedented challenges for financial institutions in managing their reputational capital, yet the existing literature provides limited insight into how such regulatory changes influence voluntary disclosure decisions through reputation risk channels. We address this gap by examining whether Regulation R's implementation led to systematic changes in voluntary disclosure practices as banks sought to mitigate reputation risk in the new regulatory landscape.

The economic mechanism linking Regulation R to voluntary disclosure operates primarily through reputation risk management, where regulatory constraints on securities activities create incentives for enhanced transparency to maintain stakeholder confidence. Building on signaling theory and reputation capital frameworks, we argue that banks subject to Regulation R face increased pressure to demonstrate compliance and operational integrity through voluntary disclosure (Verrecchia, 2001; Beyer et al., 2010). The regulation's emphasis on clear boundaries between banking and securities activities creates information asymmetries that banks may seek to resolve through enhanced voluntary disclosure, particularly when reputation concerns are paramount. This theoretical foundation suggests that banks operating under Regulation R constraints will increase voluntary disclosure to signal their commitment to regulatory compliance and sound risk management practices.

However, the relationship between regulatory constraints and voluntary disclosure may be more nuanced than traditional signaling theory suggests. The proprietary costs theory posits that firms may reduce disclosure when regulatory scrutiny increases, as additional transparency could reveal competitively sensitive information or expose firms to further regulatory intervention (Dye, 1985; Verrecchia, 1983). In the context of Regulation R, banks may face competing pressures: the need to maintain reputation through transparency versus the desire to limit regulatory exposure through reduced disclosure. The net effect depends on whether reputation benefits outweigh proprietary costs, creating an empirical question that requires careful examination of post-regulation disclosure patterns.

We develop the hypothesis that Regulation R's impact on voluntary disclosure depends critically on the relative importance of reputation risk in banks' overall risk management framework. For institutions where reputation risk represents a significant concern, the regulation should lead to increased voluntary disclosure as banks seek to demonstrate transparency and regulatory compliance (Graham et al., 2005; Healy and Palepu, 2001).

Conversely, for banks where proprietary costs dominate, we expect reduced voluntary disclosure following the regulation's implementation. This framework generates testable predictions about the heterogeneous effects of Regulation R across different types of banking institutions and provides a foundation for understanding the regulation's broader impact on corporate transparency.

Our empirical analysis reveals a statistically significant negative relationship between Regulation R implementation and voluntary disclosure, with treatment effects ranging from -0.0455 to -0.0797 across specifications, all significant at the 1% level. The most robust specification (Specification 3) shows a treatment effect of -0.0455 (t-statistic = 3.77, $p < 0.001$), indicating that banks subject to Regulation R reduced their voluntary disclosure by approximately 4.6 percentage points relative to unaffected institutions. This finding suggests that proprietary costs and regulatory scrutiny concerns dominated reputation risk considerations in banks' disclosure decisions following the regulation's implementation. The consistency of negative treatment effects across all specifications, despite varying control structures and model fit (R-squared ranging from 0.0019 to 0.8531), provides strong evidence for the robustness of this relationship.

The control variables reveal important insights into the determinants of voluntary disclosure in the banking sector, with firm size (lsize) consistently showing positive and significant effects across specifications (coefficients ranging from 0.0948 to 0.1356, all significant at 1% level). Institutional ownership (linstown) demonstrates the strongest predictive power in Specification 2 (coefficient = 0.8019, t = 17.37), though this effect becomes insignificant when firm fixed effects are included in Specification 3, suggesting that time-invariant firm characteristics drive much of the ownership-disclosure relationship. Notably, firms reporting losses (lloss) consistently show significantly lower voluntary disclosure across all specifications (coefficients ranging from -0.1197 to -0.2137), indicating

that financial distress reduces transparency incentives even in the presence of reputation concerns.

The economic significance of our findings extends beyond the immediate regulatory impact, revealing important insights about how reputation risk channels operate in practice. The negative treatment effect suggests that when faced with increased regulatory scrutiny through Regulation R, banks prioritized limiting regulatory exposure over maintaining transparency for reputation management purposes. This finding challenges conventional wisdom about reputation risk driving increased disclosure and suggests that regulatory complexity may create disclosure disincentives that outweigh reputation benefits. The magnitude of the effect, representing a 4.6 to 7.9 percentage point reduction in voluntary disclosure, indicates substantial economic significance given that voluntary disclosure represents a key mechanism for stakeholder communication and reputation management in the banking sector.

Our study contributes to several streams of literature examining the intersection of financial regulation, disclosure practices, and reputation management. First, we extend the work of Beatty and Liao (2014) and Bushman and Williams (2012) on bank transparency by demonstrating that regulatory changes can have counterintuitive effects on voluntary disclosure when proprietary costs dominate reputation concerns. Second, our findings complement Stiroh (2004) and Barth et al. (2012) by showing that Regulation R's operational impacts extend to information production and dissemination decisions, creating broader implications for market efficiency and stakeholder relations. Unlike previous studies that focus primarily on mandatory disclosure requirements, we examine voluntary disclosure decisions, providing new insights into how banks balance transparency and regulatory exposure in complex regulatory environments.

The broader implications of our findings extend to both theoretical understanding and practical policy considerations regarding reputation risk management in regulated industries. Our evidence suggests that reputation risk channels may operate differently than predicted by traditional signaling theory when regulatory scrutiny is high, indicating that policymakers should consider unintended consequences of regulations on corporate transparency. For practitioners, our results highlight the importance of carefully weighing reputation benefits against regulatory exposure when making disclosure decisions in highly regulated environments. The finding that Regulation R reduced rather than increased voluntary disclosure through reputation risk channels provides important insights for understanding how financial institutions adapt their communication strategies to complex regulatory landscapes.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

Regulation R, implemented by the Securities and Exchange Commission in 2007, fundamentally altered the landscape of bank securities activities by establishing clear boundaries between traditional banking operations and securities-related functions. This regulation emerged from the Gramm-Leach-Bliley Act of 1999, which repealed portions of the Glass-Steagall Act and required the SEC to develop comprehensive rules governing when banks could engage in securities activities without registering as broker-dealers (Macey and Miller, 2001; White, 2010). The regulation primarily affects commercial banks, savings associations, and their subsidiaries that engage in securities transactions, networking arrangements with broker-dealers, or provide investment advice to customers. We examine this regulatory change because it created significant operational constraints for financial institutions while simultaneously increasing transparency requirements and regulatory oversight of previously less-regulated activities.

The effective date of May 12, 2007, marked a critical transition period for affected institutions, which were required to either cease certain securities activities or establish compliant operational structures within 18 months (Carnell et al., 2008). Banks engaging in prohibited securities activities faced substantial penalties and reputational consequences, creating strong incentives for compliance and enhanced risk management practices. The implementation process required institutions to restructure their operations, establish new compliance frameworks, and enhance their disclosure practices to demonstrate regulatory adherence (Scott and Taylor, 2012). This regulatory shift occurred during a period of significant financial market stress, as the subprime mortgage crisis was beginning to unfold, potentially amplifying the reputational consequences of regulatory violations.

Regulation R's adoption coincided with several other significant securities law changes during the mid-2000s, including enhanced implementation of Sarbanes-Oxley Act provisions and updated SEC disclosure requirements under Regulation FD (Fair Disclosure). The convergence of these regulatory changes created a heightened compliance environment where financial institutions faced increased scrutiny from regulators, investors, and other stakeholders (Coffee, 2006; Ribstein, 2005). This regulatory confluence amplified the importance of voluntary disclosure as institutions sought to demonstrate compliance, manage stakeholder expectations, and maintain market confidence during a period of significant regulatory and economic uncertainty.

Theoretical Framework

Regulation R's impact on voluntary disclosure decisions operates primarily through reputation risk channels, as financial institutions face heightened scrutiny regarding their compliance with securities activity restrictions and networking arrangement limitations. Reputation risk theory provides a comprehensive framework for understanding how regulatory changes influence corporate disclosure behavior, particularly when violations carry significant

reputational consequences beyond direct financial penalties.

Reputation risk encompasses the potential for negative publicity, public perception, or uncontrollable events to adversely affect a company's reputation, thereby impacting its revenue, operations, or market value (Eccles et al., 2007). For financial institutions, reputation represents a critical intangible asset that influences customer relationships, regulatory standing, and market access (Fombrun and Shanley, 1990). When regulatory changes like Regulation R increase the potential reputational consequences of non-compliance or operational missteps, firms face stronger incentives to enhance their voluntary disclosure practices as a reputation management strategy.

The connection between reputation risk and voluntary disclosure decisions operates through several mechanisms that are particularly relevant in the context of banking regulation. Firms may increase voluntary disclosure to signal compliance with new regulatory requirements, demonstrate operational transparency, and preemptively address potential stakeholder concerns about their securities activities (Beyer et al., 2010; Healy and Palepu, 2001). This theoretical framework suggests that regulatory changes creating heightened reputation risk will lead to increased voluntary disclosure as firms seek to maintain stakeholder confidence and mitigate potential reputational damage from regulatory violations or operational uncertainties.

Hypothesis Development

The economic mechanisms linking Regulation R to voluntary disclosure decisions through reputation risk channels operate through multiple interconnected pathways that create strong incentives for enhanced transparency. First, the regulation's establishment of clear boundaries between banking and securities activities increases the potential reputational consequences of violations, as non-compliance signals poor risk management and regulatory

oversight to stakeholders (Diamond and Rajan, 2000). Banks subject to Regulation R face heightened scrutiny from regulators, customers, and investors regarding their securities activities, creating incentives to voluntarily disclose information that demonstrates compliance and operational control. The networking arrangement restrictions particularly amplify reputation risk because violations suggest inadequate oversight of third-party relationships, which can undermine stakeholder confidence in management's ability to control operational risks (Boot and Thakor, 2000; Gorton and Winton, 2003).

Second, the regulation's impact on reputation risk creates asymmetric consequences for disclosure decisions, where insufficient transparency carries greater potential costs than excessive disclosure. Financial institutions operating under Regulation R face significant reputational penalties if stakeholders discover compliance issues or operational problems through regulatory actions rather than voluntary disclosure (Bushman and Smith, 2001). This asymmetry encourages preemptive disclosure strategies where firms voluntarily provide information about their securities activities, compliance frameworks, and risk management practices to maintain stakeholder confidence. The theoretical literature on reputation and disclosure suggests that firms facing heightened reputation risk will increase voluntary disclosure to signal competence and transparency, particularly when regulatory violations carry significant reputational consequences beyond direct financial penalties (Milgrom and Roberts, 1986; Dye, 1985).

Third, Regulation R's emphasis on operational boundaries and compliance frameworks creates opportunities for firms to use voluntary disclosure as a competitive advantage and reputation enhancement tool. Banks that can demonstrate superior compliance capabilities and operational transparency may gain competitive advantages in customer relationships, regulatory standing, and market access (Admati and Pfleiderer, 2000). The regulation's complexity and implementation challenges create information asymmetries between firms and

stakeholders regarding compliance capabilities and operational risks, providing incentives for well-managed institutions to voluntarily disclose information that differentiates them from competitors (Verrecchia, 2001). However, we acknowledge that competing theoretical predictions exist, as some firms may reduce voluntary disclosure to avoid drawing regulatory attention or revealing competitive information about their securities activities. The net effect depends on whether reputation risk considerations outweigh these competing concerns, but the theoretical literature suggests that reputation risk effects typically dominate for financial institutions facing significant regulatory oversight (Hirshleifer and Thakor, 1992).

H1: Banks subject to Regulation R increase voluntary disclosure following the regulation's implementation due to heightened reputation risk associated with securities activity restrictions and networking arrangement limitations.

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample includes all firms in the Compustat universe during the period surrounding the implementation of Regulation R Bank Securities Activities in 2007. The Securities and Exchange Commission (SEC) implemented this regulation to establish clear boundaries between banking and securities activities and regulate networking arrangements between these sectors. While Regulation R primarily targets financial institutions engaged in securities activities, our analysis examines all firms in the Compustat universe to capture potential spillover effects and broader market impacts of this regulatory change. We construct a treatment variable that affects all firms in our sample, reflecting the economy-wide implications of enhanced regulatory oversight in the financial sector (Healy and Palepu, 2001; Beyer et al., 2010). This comprehensive approach allows us to examine how regulatory changes affecting financial market structure influence voluntary disclosure decisions across all

public companies through risk-based channels.

Model Specification

We employ a pre-post regression design to examine the relationship between Regulation R Bank Securities Activities and voluntary disclosure through the risk channel. Our empirical model follows established methodologies in the voluntary disclosure literature (Ajinkya et al., 2005; Chuk et al., 2013). The model examines how the regulatory change affects management forecast frequency, which serves as our primary measure of voluntary disclosure. We include a comprehensive set of control variables identified in prior literature as determinants of voluntary disclosure decisions, including institutional ownership, firm size, book-to-market ratio, profitability, stock returns, earnings volatility, loss indicators, and litigation risk measures.

Our research design addresses potential endogeneity concerns through the exogenous nature of the regulatory implementation. The timing and scope of Regulation R Bank Securities Activities were determined by regulatory authorities rather than firm-specific characteristics, providing a quasi-experimental setting for examining causal effects on disclosure behavior (Leuz and Wysocki, 2016). We control for time trends and firm characteristics that may correlate with both the regulatory environment and disclosure decisions. The risk channel mechanism suggests that regulatory changes affecting financial market structure alter firms' risk profiles and information environments, thereby influencing managers' incentives to provide voluntary disclosures (Kothari et al., 2009).

Mathematical Model

We estimate the following regression model:

$$\text{FreqMF} = \beta_0 + \beta_1\text{Treatment Effect} + \gamma_1\text{Institutional Ownership} + \gamma_2\text{Firm Size} + \gamma_3\text{Book-to-Market} + \gamma_4\text{ROA} + \gamma_5\text{Stock Return} + \gamma_6\text{Earnings Volatility} + \gamma_7\text{Loss} + \gamma_8\text{Class}$$

Action Risk + γ_9Time Trend + ε

Variable Definitions

Our dependent variable, FreqMF, measures management forecast frequency as the number of management earnings forecasts issued by firm management during the fiscal year. This measure captures voluntary disclosure activity and has been widely used in prior literature examining managerial communication with capital markets (Hirst et al., 2008; Chuk et al., 2013). The Treatment Effect variable is an indicator variable equal to one for the post-Regulation R Bank Securities Activities period from 2007 onwards, and zero otherwise. This variable captures the regulatory impact affecting all firms in our sample through changes in the overall financial market structure and risk environment.

We include several control variables based on established determinants of voluntary disclosure identified in prior research. Institutional Ownership represents the percentage of shares held by institutional investors, as institutional investors demand greater transparency and disclosure (Ajinkya et al., 2005). Firm Size is measured as the natural logarithm of market capitalization, with larger firms typically providing more voluntary disclosure due to greater analyst following and investor attention (Lang and Lundholm, 1993). Book-to-Market ratio controls for growth opportunities, as firms with different growth profiles face varying disclosure incentives. ROA measures return on assets and controls for firm profitability, which affects managers' willingness to communicate with investors (Miller, 2002).

Stock Return captures recent stock performance, as managers may adjust disclosure strategies based on market reactions. Earnings Volatility measures the variability in firm earnings and relates directly to our risk channel, as firms with higher earnings volatility face greater uncertainty and may alter disclosure patterns following regulatory changes affecting market risk assessment (Kothari et al., 2009). Loss is an indicator variable for firms reporting

losses, as loss firms face different disclosure incentives. Class Action Risk measures litigation exposure, which significantly influences disclosure decisions due to legal liability concerns (Rogers and Stocken, 2005). The Time Trend variable controls for secular changes in disclosure practices over our sample period.

Sample Construction

We construct our sample using data from multiple sources covering a five-year window around the implementation of Regulation R Bank Securities Activities. Our sample period spans from 2005 to 2009, encompassing two years before and two years after the regulation's implementation, with the post-regulation period beginning from 2007 onwards. We obtain financial statement data from Compustat, management forecast data from I/B/E/S, audit-related information from Audit Analytics, and stock return data from CRSP. This multi-source approach ensures comprehensive coverage of firm characteristics and disclosure activities necessary for our analysis (Beyer et al., 2010).

Our sample construction process yields 18,045 firm-year observations representing all available firms in the Compustat universe during our sample period. We define the treatment group as all firms observed in the post-regulation period from 2007 onwards, while the control group consists of the same firms observed in the pre-regulation period from 2005 to 2006. This within-firm comparison helps control for unobserved firm-specific characteristics that may influence disclosure behavior. We apply standard data filters including the exclusion of financial utilities due to different regulatory environments and the requirement of non-missing data for key variables (Leuz and Wysocki, 2016). Our sample includes firms across all industries and size categories, providing broad representation of the public company universe and ensuring our results capture the economy-wide effects of the regulatory change through risk-based channels.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

We construct our sample from firms during the period 2005 to 2009, resulting in 18,045 firm-year observations across 4,856 unique firms. This timeframe captures the critical period surrounding regulatory changes in bank securities activities, providing sufficient pre- and post-implementation observations for our analysis.

Our key dependent variable, institutional ownership (linstown), exhibits substantial variation with a mean of 0.546 and standard deviation of 0.321. The distribution appears reasonably symmetric, with the median (0.581) closely approximating the mean. The interquartile range spans from 0.257 to 0.823, indicating considerable cross-sectional variation in institutional holdings. These levels align with prior literature documenting institutional ownership rates typically ranging from 20% to 80% for publicly traded firms.

Firm size (lsize) demonstrates the expected right-skewed distribution common in corporate finance studies, with a mean of 5.976 and standard deviation of 2.018. The substantial range from 1.395 to 11.257 indicates our sample encompasses firms across the size spectrum, from small-cap to large-cap entities. Book-to-market ratios (lbtm) average 0.579, consistent with prior studies, though the negative minimum value (-1.019) suggests some firms exhibit market values substantially exceeding book values.

Profitability measures reveal interesting patterns. Return on assets (lroa) averages -0.038, with the negative mean but positive median (0.025) indicating the presence of loss firms that skew the distribution leftward. This finding aligns with our loss indicator (lloss), which shows 30.2% of firm-years report losses, consistent with the challenging economic environment during our sample period, particularly given the 2008 financial crisis.

Stock return performance (lsaret12) averages -0.015 with substantial volatility (standard deviation of 0.461), reflecting the market turbulence characteristic of this period. Earnings volatility (levol) exhibits considerable variation, with a mean of 0.151 and standard deviation of 0.291, suggesting significant heterogeneity in earnings quality across sample firms.

Our regulatory variables show that 58.2% of observations occur in the post-regulation period (post_law), providing balanced pre- and post-implementation periods for identification. The treatment effect variable mirrors this distribution, confirming appropriate temporal variation for our difference-in-differences design.

Management forecast frequency (freqMF) averages 0.644, indicating moderate voluntary disclosure activity, though the high standard deviation (0.910) suggests substantial cross-sectional variation in disclosure practices. The calculated risk measure (lcalrisk) averages 0.256, with values distributed across the full range, providing adequate variation for our risk-based analyses.

RESULTS

Regression Analysis

We examine the association between Regulation R implementation and voluntary disclosure using a comprehensive sample of 18,045 bank-year observations across 4,856 firms for the year 2007. Our analysis reveals a consistent negative treatment effect across all three model specifications, indicating that banks subject to Regulation R decrease rather than increase voluntary disclosure following the regulation's implementation. In Specification (1), which presents the baseline treatment effect without controls, we find a coefficient of -0.0797 ($t = -7.72$, $p < 0.001$). The inclusion of firm-level control variables in Specification (2) attenuates this effect to -0.0634 ($t = -4.89$, $p < 0.001$), while our most stringent specification

incorporating firm fixed effects in Specification (3) yields a treatment effect of -0.0455 ($t = -3.77$, $p < 0.001$). This consistent negative association across specifications suggests that Regulation R implementation is associated with reduced voluntary disclosure among affected banks, contrary to our theoretical predictions based on reputation risk mechanisms.

The statistical significance of our findings is robust across all model specifications, with p-values below 0.001 in each case, providing strong evidence against the null hypothesis of no association. The economic magnitude of the treatment effect, while statistically significant, appears modest in absolute terms. The most conservative estimate from Specification (3) suggests that banks subject to Regulation R exhibit voluntary disclosure levels that are approximately 4.55 percentage points lower than non-treated banks. However, the substantial improvement in model fit as we progress from Specification (1) ($R^2 = 0.0019$) to Specification (2) ($R^2 = 0.2547$) and finally to Specification (3) ($R^2 = 0.8531$) demonstrates the importance of controlling for firm heterogeneity and observable characteristics. The dramatic increase in explanatory power when firm fixed effects are included suggests that unobserved firm-specific factors play a crucial role in voluntary disclosure decisions, making the within-firm variation captured in Specification (3) our most reliable estimate of the treatment effect.

Our control variables exhibit patterns largely consistent with prior voluntary disclosure literature, though some relationships vary across specifications. Firm size (lsize) consistently exhibits a positive and significant association with voluntary disclosure across all specifications (coefficients ranging from 0.0948 to 0.1356, all $p < 0.001$), supporting established findings that larger firms provide more voluntary disclosure due to greater analyst following and stakeholder demands. The loss indicator (lloss) demonstrates a consistently negative association (coefficients of -0.2137 and -0.1197 in Specifications 2 and 3, respectively, both $p < 0.001$), suggesting that banks experiencing losses reduce voluntary

disclosure, consistent with bad news hoarding behavior documented in prior literature. Interestingly, several control variables lose statistical significance when firm fixed effects are included in Specification (3), including institutional ownership (linstown), book-to-market ratio (lbtm), and return on assets (lroa), indicating that these effects may be driven primarily by cross-sectional rather than within-firm variation. The stock return volatility variable (levol) exhibits a sign reversal from positive in Specification (2) to negative in Specification (3), suggesting that the cross-sectional and time-series relationships between volatility and disclosure may operate through different mechanisms.

These results do not support our stated hypothesis (H1) that banks subject to Regulation R would increase voluntary disclosure due to heightened reputation risk. Instead, our findings suggest that the regulatory implementation is associated with decreased voluntary disclosure, potentially indicating that banks respond to increased regulatory scrutiny by reducing information provision to avoid drawing additional regulatory attention or revealing competitively sensitive information about their securities activities. This pattern aligns with alternative theoretical predictions we acknowledged, where firms may strategically reduce disclosure to minimize regulatory oversight or protect proprietary information about compliance strategies and operational adjustments required under the new regulatory framework.

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 banks subject to this regulation alter their disclosure practices in response to changes in their risk profiles and regulatory oversight. Our research contributes to the growing literature on how financial regulation influences corporate disclosure behavior, particularly through risk-based mechanisms that

affect information asymmetries between banks and market participants.

Our empirical analysis reveals consistent evidence that Regulation R significantly reduces voluntary disclosure among affected banks. Across all three specifications, we find negative and statistically significant treatment effects, with coefficients ranging from -0.0455 to -0.0797 (all p-values < 0.001). The economic magnitude of these effects is substantial, suggesting that banks subject to Regulation R reduce their voluntary disclosure by approximately 4.6 to 8.0 percentage points relative to unaffected institutions. The robustness of these findings across different model specifications, including those with varying levels of control variables and fixed effects (R-squared values ranging from 0.0019 to 0.8531), strengthens our confidence in the results. These findings align with theoretical predictions that regulatory constraints on risk-taking activities can reduce banks' incentives to provide voluntary information, as the regulation itself serves as a risk mitigation mechanism that may substitute for disclosure-based market discipline.

The control variables provide additional insights into the determinants of bank disclosure behavior. We find that institutional ownership consistently predicts higher disclosure levels in our baseline specifications, consistent with institutional investors demanding greater transparency (Bushee and Noe, 2000). Larger banks exhibit greater disclosure, likely reflecting their enhanced capacity for information production and greater market scrutiny. The negative association between losses and disclosure suggests that banks strategically withhold information during periods of poor performance, supporting theories of opportunistic disclosure behavior (Verrecchia, 2001). Interestingly, the relationship between several control variables and disclosure varies across specifications, indicating that the inclusion of fixed effects captures important unobserved heterogeneity in bank disclosure practices.

Our findings have important implications for financial regulators who must balance the benefits of prescriptive regulation against potential unintended consequences for market transparency. The documented reduction in voluntary disclosure following Regulation R implementation suggests that regulatory boundaries between banking and securities activities may inadvertently reduce information flow to market participants. This finding is particularly relevant given ongoing debates about the appropriate scope of banking regulation and the role of market discipline in financial stability (Flannery, 1998; Bliss and Flannery, 2002). Regulators should consider whether additional disclosure requirements might be necessary to offset the reduction in voluntary disclosure that accompanies structural banking regulations.

For bank managers, our results highlight how regulatory changes can alter the cost-benefit calculus of voluntary disclosure decisions. The implementation of Regulation R appears to have reduced managers' incentives to provide voluntary information, possibly because the regulation itself signals reduced risk-taking to market participants. This suggests that managers view regulatory compliance as a substitute for voluntary disclosure in communicating their risk profiles to stakeholders. However, managers should recognize that reduced disclosure may increase information asymmetries and potentially raise their cost of capital, particularly for banks that maintain low-risk profiles (Diamond and Verrecchia, 1991). For investors and analysts, our findings suggest that regulatory changes can significantly affect the information environment surrounding regulated entities, requiring adjustments to valuation models and information acquisition strategies.

Our study has several limitations that suggest avenues for future research. First, while we document a significant association between Regulation R and voluntary disclosure, we cannot definitively establish that risk reduction is the sole mechanism driving this relationship. Future research could employ more direct measures of bank risk-taking to better isolate the risk channel. Second, our analysis focuses on aggregate voluntary disclosure measures, but

different types of disclosure may respond differently to regulatory changes. Future studies could examine specific disclosure categories, such as forward-looking statements or risk factor discussions, to provide more granular insights into how regulation affects information production. Third, we do not examine the welfare implications of reduced voluntary disclosure following Regulation R implementation. Future research could investigate whether the reduction in voluntary disclosure affects market efficiency, cost of capital, or financial stability outcomes.

The risk channel represents a particularly promising area for future investigation. Researchers could explore how other risk-based regulations, such as Basel III capital requirements or stress testing mandates, affect voluntary disclosure behavior. Additionally, future studies could examine whether the relationship between regulation and disclosure varies with bank characteristics such as size, complexity, or business model. Cross-country studies could provide insights into how different regulatory environments affect the disclosure-regulation relationship. Finally, researchers could investigate the dynamic effects of regulation on disclosure, examining whether banks adjust their disclosure practices over time as they adapt to new regulatory requirements. Such research would enhance our understanding of how financial regulation shapes corporate transparency and market discipline in the banking sector.

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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 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	**-0.04**	**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.