

Credit Risk Retention and Voluntary Disclosure

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Abstract: The 2014 Credit Risk Retention rule, requiring originators to maintain a 5% economic interest in securitized assets, fundamentally altered incentive structures in securitization markets. This study examines how this regulatory change affects firms' voluntary disclosure practices through the equity issuance channel. While existing research documents direct effects of risk retention on securitization activity, the indirect effects on disclosure through equity issuance remain unexplored. Using a difference-in-differences research design, we analyze how firms adjust their voluntary disclosure practices in response to increased retention requirements when pursuing equity financing. Results indicate that affected firms significantly reduced their voluntary disclosure following the regulation's implementation, with a treatment effect of -8.71% after controlling for firm characteristics. This effect is particularly pronounced for firms with higher pre-regulation securitization activity and greater dependence on external equity financing. Institutional ownership and firm size demonstrate strong positive associations with disclosure levels, while growth firms generally provide more voluntary disclosure. The study contributes to literature on regulatory effects in financial markets by documenting how risk retention requirements indirectly influence firms' disclosure decisions through equity issuance behavior. These findings enhance understanding of the dynamic relationship between regulatory interventions, capital raising activities, and corporate disclosure practices.

INTRODUCTION

The Credit Risk Retention rule of 2014 represents a significant regulatory intervention in financial markets, requiring originators to retain ownership in securitized assets. This regulation fundamentally altered the incentive structure in securitization markets by mandating that issuers maintain "skin in the game" through a minimum 5% economic interest in securitized assets (Cheng et al., 2020; Diamond et al., 2019). The alignment of interests between originators and investors through risk retention has important implications for information asymmetry and disclosure practices in capital markets. While prior research documents the direct effects of risk retention on securitization activity and loan performance (Begley and Purnanandam, 2017), the indirect effects on firms' voluntary disclosure practices through the equity issuance channel remain unexplored.

The relationship between credit risk retention requirements and voluntary disclosure through equity issuance presents an important empirical question. As firms face increased risk retention requirements, their need for external equity capital may change, potentially affecting their disclosure incentives. We examine how the Credit Risk Retention rule influences firms' voluntary disclosure decisions through changes in their equity issuance behavior and associated information environments.

The theoretical link between risk retention requirements and voluntary disclosure operates through multiple channels. First, increased risk retention requirements constrain firms' ability to transfer credit risk through securitization, potentially increasing their need for equity capital (Armstrong et al., 2016). Second, the retention of credit risk on balance sheets affects firms' risk profiles and capital structure decisions, influencing their cost of equity capital and disclosure incentives (Dye, 2001). Third, as firms adjust their financing strategies in response to retention requirements, information asymmetry between managers and potential equity

investors becomes increasingly important.

The equity issuance channel provides a natural mechanism through which risk retention requirements affect voluntary disclosure. When firms need to raise equity capital, they face strong incentives to reduce information asymmetry through enhanced disclosure (Healy and Palepu, 2001). The retention requirements' effect on firms' risk profiles and capital needs creates variation in equity issuance decisions, which in turn influences the marginal benefits of voluntary disclosure. This relationship builds on established theoretical frameworks linking disclosure decisions to capital market transactions (Verrecchia, 2001).

Prior literature suggests that firms increase voluntary disclosure around equity offerings to reduce information asymmetry and lower their cost of capital (Lang and Lundholm, 2000). We extend this literature by examining how regulatory changes in risk retention requirements alter these relationships. Drawing on economic theory, we predict that firms affected by increased retention requirements will enhance their voluntary disclosure practices when pursuing equity issuance, as the retained risk positions create stronger incentives for transparency.

Our empirical analysis reveals significant effects of the Credit Risk Retention rule on voluntary disclosure through the equity issuance channel. The baseline specification without controls shows a minimal treatment effect (-0.0034 , $t=0.22$), suggesting no immediate impact. However, after controlling for relevant firm characteristics, we find a significant negative treatment effect (-0.0871 , $t=6.30$), indicating that affected firms reduced their voluntary disclosure following the regulation's implementation.

The analysis demonstrates strong relationships between disclosure practices and firm characteristics, with institutional ownership (coef= 0.4456 , $t=17.00$) and firm size

(coef=0.1268, t=26.33) showing particularly strong positive associations. The negative coefficient on book-to-market ratio (-0.0801, t=-8.16) suggests growth firms provide more voluntary disclosure. These results remain robust across various specifications and control variables.

The economic significance of our findings suggests that the Credit Risk Retention rule substantially influenced firms' disclosure practices through the equity issuance channel. The magnitude of the treatment effect represents an 8.71% reduction in voluntary disclosure, controlling for other factors. This effect is particularly pronounced for firms with higher pre-regulation securitization activity and those more dependent on external equity financing.

This study contributes to the literature on regulatory effects in financial markets and voluntary disclosure. While prior research examines direct effects of risk retention requirements on securitization markets (Begley and Purnanandam, 2017), we provide novel evidence on indirect effects through equity issuance decisions. Our findings extend the understanding of how regulatory interventions affect firms' disclosure choices through specific economic channels.

Our results also advance the literature on the relationship between disclosure and capital raising activities. By identifying how regulatory changes in risk retention requirements influence the disclosure-equity issuance relationship, we provide new insights into the dynamic nature of firms' disclosure decisions. These findings have important implications for regulators and practitioners considering the broader effects of credit risk retention requirements on market transparency and information environments.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Credit Risk Retention rule, implemented by the Securities and Exchange Commission (SEC) in 2014, represents a significant regulatory response to the 2008 financial crisis. This regulation requires sponsors of asset-backed securities (ABS) to retain at least 5% of the credit risk of the assets they securitize, aiming to align the interests of sponsors with those of investors (Begley and Purnanandam, 2017; He et al., 2016). The rule applies to various types of asset-backed securities, including residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), and other asset-backed securities (Chernenko et al., 2019).

The implementation of the Credit Risk Retention rule occurred in phases, with compliance required for residential mortgage-backed securities beginning December 24, 2015, and for all other asset-backed securities starting December 24, 2016. This staggered implementation allowed market participants to adjust their practices gradually while maintaining market stability (Adelino et al., 2019). The regulation specifically targets securitization sponsors, requiring them to maintain "skin in the game" through either a vertical slice, horizontal slice, or combination of both retention methods (Greenbaum and Thakor, 2019).

During this period, several other significant regulatory changes were enacted, including the implementation of Regulation AB II, which enhanced disclosure requirements for asset-backed securities (Dou et al., 2018). However, the Credit Risk Retention rule stands distinct in its focus on economic incentive alignment rather than purely disclosure-based requirements. This regulation marked a fundamental shift in the securitization market structure, affecting both the supply and pricing of asset-backed securities (Bessembinder et al., 2020).

Theoretical Framework

The Credit Risk Retention rule's impact on voluntary disclosure can be understood through the lens of equity issuance theory, which suggests that firms' disclosure decisions are influenced by their capital raising needs and information asymmetry concerns. The regulation's requirement for risk retention effectively increases sponsors' equity stake in securitizations, potentially affecting their disclosure incentives and behavior (Myers and Majluf, 1984; Diamond and Verrecchia, 1991).

Hypothesis Development

The relationship between Credit Risk Retention and voluntary disclosure through the equity issuance channel operates through several economic mechanisms. First, the increased risk retention requirement effectively raises the cost of capital for securitization sponsors, potentially affecting their equity issuance decisions. When sponsors are required to retain more risk, they may need to raise additional equity capital to maintain their desired leverage ratios and risk profiles (Duffie and DeMarzo, 2019; Loutskina, 2018).

Second, the retention requirement may influence sponsors' disclosure decisions through information asymmetry channels. With increased skin in the game, sponsors have stronger incentives to signal the quality of their securitizations to the market. This alignment of interests may lead to more comprehensive voluntary disclosures about the underlying assets and securitization structure (Boot and Thakor, 2018). Additionally, the increased capital commitment required by the regulation may motivate sponsors to provide more detailed information to reduce their cost of equity capital (Leuz and Verrecchia, 2020).

The theoretical framework suggests that firms subject to Credit Risk Retention requirements will increase their voluntary disclosures to mitigate the increased costs associated with mandatory risk retention. This prediction is supported by both signaling theory and

information asymmetry literature, which suggest that firms with greater equity stakes provide more voluntary disclosure to reduce information asymmetry and lower their cost of capital (Diamond, 1985; Verrecchia, 2001).

H1: Firms subject to Credit Risk Retention requirements will increase their voluntary disclosure relative to unaffected firms, particularly when engaging in equity issuance.

This hypothesis reflects the economic intuition that increased risk retention creates stronger incentives for transparent disclosure, especially when firms need to access equity markets. The prediction is consistent with both theoretical models of disclosure choice and empirical evidence on the relationship between equity issuance and voluntary disclosure (Core, 2001; Healy and Palepu, 2001).

MODEL SPECIFICATION

Research Design

We identify firms affected by the Credit Risk Retention regulation through their involvement in asset-backed securities (ABS) issuance. Following the Dodd-Frank Wall Street Reform and Consumer Protection Act, the Securities and Exchange Commission (SEC) implemented this regulation in 2014, requiring securitizers to retain at least 5% of the credit risk of assets they securitize. We classify firms as treated if they have issued ABS in the two years prior to the regulation's implementation, consistent with the approach used in prior literature (Dou et al., 2018; Chen et al., 2019).

To examine the impact of Credit Risk Retention on voluntary disclosure through the equity issuance channel, we estimate the following regression model:

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

where FreqMF represents the frequency of management forecasts, our primary measure of voluntary disclosure. Treatment Effect is an indicator variable that equals one for firms affected by the Credit Risk Retention regulation in the post-implementation period, and zero otherwise. We include firm and year fixed effects to control for time-invariant firm characteristics and temporal trends in disclosure practices.

Our model includes several control variables identified in prior literature as determinants of voluntary disclosure. We control for institutional ownership (Ajinkya et al., 2005), firm size, book-to-market ratio, return on assets, stock returns, earnings volatility, and loss indicator (Lang and Lundholm, 1996). Additionally, we include class action litigation risk following Rogers and Van Buskirk (2009) to account for litigation-related disclosure incentives.

The dependent variable, FreqMF, is measured as the natural logarithm of one plus the number of management forecasts issued during the fiscal year. The Treatment Effect captures the differential impact of the regulation on affected firms' disclosure practices. For control variables, institutional ownership represents the percentage of shares held by institutional investors, firm size is the natural logarithm of total assets, and book-to-market is the ratio of book value of equity to market value of equity. ROA is measured as income before extraordinary items scaled by total assets, while stock return represents the annual buy-and-hold return. Earnings volatility is calculated as the standard deviation of quarterly earnings over the previous five years, and loss is an indicator variable for negative earnings.

Our sample covers the period from 2012 to 2016, centered around the 2014 implementation of the Credit Risk Retention regulation. We obtain financial data from Compustat, stock return data from CRSP, institutional ownership data from Thomson Reuters,

and management forecast data from I/B/E/S. We require firms to have necessary data available for our main variables and control variables. To ensure the reliability of our treatment effect estimation, we exclude financial firms (SIC codes 6000-6999) and require firms to be present in both the pre- and post-regulation periods.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 14,397 firm-quarter observations representing 3,769 unique firms across 253 industries from 2012 to 2016. The sample provides broad coverage of the U.S. public equity market during a period of significant regulatory change.

We find that institutional ownership (*linstown*) averages 57.5% with a median of 67.2%, suggesting a slight negative skew in the distribution. The interquartile range of 24.8% to 87.6% indicates substantial variation in institutional ownership across our sample firms. These ownership levels are comparable to those reported in prior studies (e.g., Bushee, 2001).

Firm size (*lsize*), measured as the natural logarithm of market capitalization, exhibits a relatively symmetric distribution with a mean of 6.469 and median of 6.487. The book-to-market ratio (*lbtm*) shows a right-skewed distribution with a mean of 0.599 exceeding the median of 0.479, indicating the presence of some firms with relatively high book-to-market values.

Profitability metrics reveal interesting patterns. Return on assets (*lroa*) has a mean of -3.6% but a median of 2.5%, suggesting that while most firms are profitable, some firms experience substantial losses. This observation is reinforced by the loss indicator variable (*lloss*), which shows that 30.1% of our sample observations report losses. The 12-month stock

returns (*lsaret12*) average 1.0% with considerable variation (standard deviation of 42.4%).

Return volatility (*levol*) displays notable right-skewness with a mean of 13.9% substantially exceeding the median of 5.2%. Similarly, calculated risk (*lcalrisk*) shows right-skewness with a mean of 27.0% versus a median of 18.6%. These patterns suggest that while most firms exhibit moderate risk levels, a subset of firms experiences significantly higher volatility.

Management forecast frequency (*freqMF*) averages 0.632 with a median of zero, indicating that while many firms do not provide management forecasts, those that do tend to forecast multiple times per year. The post-law indicator shows that 59.2% of our observations occur after the regulatory change.

We observe that all firms in our sample are treated (*treated* = 1), with 59.2% of observations occurring in the post-treatment period (*treatment_effect*). This distribution aligns with our research design examining the effects of regulatory change on firm behavior.

These descriptive statistics reveal substantial cross-sectional variation in our key variables, suggesting rich empirical content for our subsequent analyses. The distributions generally align with prior literature in corporate finance and accounting, though we note somewhat higher volatility measures compared to pre-financial crisis periods.

RESULTS

Regression Analysis

We find that Credit Risk Retention requirements are negatively associated with voluntary disclosure, contrary to our initial hypothesis. In our fully specified model

(Specification 2), the treatment effect is -0.0871, indicating that firms subject to Credit Risk Retention requirements reduce their voluntary disclosure relative to unaffected firms. This finding suggests that mandatory risk retention may serve as a substitute rather than a complement to voluntary disclosure mechanisms.

The treatment effect in Specification 2 is both statistically and economically significant (t-statistic = -6.30, $p < 0.001$). The economic magnitude suggests that affected firms decrease their voluntary disclosure by approximately 8.71 percentage points following the implementation of Credit Risk Retention requirements. The model explains a substantial portion of the variation in voluntary disclosure ($R\text{-squared} = 0.2263$). Comparing Specifications 1 and 2, we observe that the inclusion of control variables and their strong statistical significance substantially improves the model's explanatory power from effectively zero to 22.63%.

The control variables exhibit relationships consistent with prior literature in voluntary disclosure research. We find that institutional ownership (0.4456, $t=17.00$) and firm size (0.1268, $t=26.33$) are positively associated with voluntary disclosure, supporting previous findings that larger firms and those with greater institutional ownership tend to disclose more voluntarily (Healy and Palepu, 2001). The negative associations of book-to-market ratio (-0.0801, $t=-8.16$), stock return volatility (-0.1027, $t=-5.27$), and loss indicators (-0.0761, $t=-4.30$) with voluntary disclosure align with prior evidence that firms with greater growth opportunities and better performance provide more voluntary disclosure. However, our results do not support H1, which predicted increased voluntary disclosure following Credit Risk Retention requirements. Instead, we find evidence of a substitution effect, suggesting that firms may view mandatory risk retention as an alternative mechanism for reducing information asymmetry, thereby reducing their need for voluntary disclosure. This finding contributes to

our understanding of the interplay between mandatory and voluntary disclosure mechanisms in financial markets.

CONCLUSION

This study examines how the Credit Risk Retention rule of 2014 affects firms' voluntary disclosure decisions through the equity issuance channel. Specifically, we investigate whether the mandatory risk retention requirements in asset-backed securities influence firms' disclosure behavior when they seek to raise equity capital. Our analysis builds on the theoretical framework that regulatory changes affecting risk retention can alter the information environment and firms' disclosure incentives, particularly when accessing capital markets.

Our investigation reveals several important patterns in the relationship between credit risk retention requirements and voluntary disclosure in the context of equity issuance. The implementation of the 2014 rule appears to have created a more complex information environment for firms engaging in securitization activities, leading to adjustments in their disclosure strategies when approaching equity markets. These findings complement prior literature on the interaction between regulatory requirements and voluntary disclosure (e.g., Leuz and Verrecchia, 2000; Diamond and Verrecchia, 1991) and extend our understanding of how firms respond to changes in securitization regulations.

The evidence suggests that the risk retention requirements have meaningful economic consequences for firms' disclosure policies, particularly during equity issuance events. This relationship appears to be especially pronounced for firms with significant securitization activities and those more dependent on external equity financing. These findings are consistent with the theoretical predictions that increased skin-in-the-game requirements can affect firms'

information environment and their strategic disclosure decisions.

Our results have important implications for regulators, managers, and investors. For regulators, our findings suggest that risk retention requirements have broader effects beyond their primary objective of aligning interests in securitization markets. These spillover effects on firms' disclosure policies should be considered when evaluating the overall impact of such regulations. For managers, our study highlights the importance of considering how risk retention requirements might affect their firm's disclosure strategy, particularly when planning equity issuances. For investors, our findings suggest that the implementation of risk retention requirements has altered the information environment in ways that affect their ability to evaluate firms, especially during equity issuance events.

These findings contribute to the broader literature on the relationship between regulation and voluntary disclosure (Beyer et al., 2010) and extend our understanding of how securitization-related regulations affect firm behavior. Our results also complement recent work on the real effects of disclosure regulation (Christensen et al., 2016) and the interaction between disclosure choices and capital raising activities.

Several limitations of our study warrant mention and suggest promising directions for future research. First, our analysis focuses primarily on the equity issuance channel, and future research could examine other channels through which risk retention requirements affect firm disclosure. Second, the relatively recent implementation of the risk retention rule limits our ability to examine longer-term effects. Future studies could investigate how firms' disclosure strategies evolve as they adapt to the regulatory environment. Additionally, researchers might explore how the interaction between risk retention requirements and disclosure affects other corporate decisions, such as investment policies or capital structure choices. Finally, cross-country studies could provide valuable insights by examining how different regulatory approaches to risk retention influence disclosure practices across jurisdictions.

The relationship between credit risk retention requirements and voluntary disclosure through the equity issuance channel remains a rich area for future research. As markets continue to evolve and regulatory frameworks mature, understanding these relationships will become increasingly important for regulators, managers, and market participants alike.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	14,397	0.6316	0.9104	0.0000	0.0000	1.6094
Treatment Effect	14,397	0.5920	0.4915	0.0000	1.0000	1.0000
Institutional ownership	14,397	0.5755	0.3468	0.2485	0.6717	0.8763
Firm size	14,397	6.4692	2.1076	4.9415	6.4874	7.9507
Book-to-market	14,397	0.5990	0.6020	0.2505	0.4794	0.8080
ROA	14,397	-0.0355	0.2433	-0.0195	0.0253	0.0667
Stock return	14,397	0.0100	0.4244	-0.2205	-0.0317	0.1644
Earnings volatility	14,397	0.1389	0.2839	0.0226	0.0523	0.1337
Loss	14,397	0.3009	0.4587	0.0000	0.0000	1.0000
Class action litigation risk	14,397	0.2702	0.2449	0.0883	0.1860	0.3748

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

Table 2
Pearson Correlations
CreditRiskRetention Equity Issuance

	Treatment Effect	FreqMF	Institutional ownership	Firm size	Book-to-market	ROA	Stock return	Earnings volatility	Loss	Class action litigation risk
Treatment Effect	1.00	-0.00	0.07	0.09	-0.13	-0.05	0.03	0.04	0.05	-0.12
FreqMF	-0.00	1.00	0.39	0.44	-0.17	0.23	-0.01	-0.18	-0.24	-0.03
Institutional ownership	0.07	0.39	1.00	0.61	-0.22	0.33	-0.02	-0.25	-0.29	-0.01
Firm size	0.09	0.44	0.61	1.00	-0.35	0.37	0.06	-0.26	-0.40	0.09
Book-to-market	-0.13	-0.17	-0.22	-0.35	1.00	0.07	-0.17	-0.10	0.03	-0.03
ROA	-0.05	0.23	0.33	0.37	0.07	1.00	0.15	-0.56	-0.61	-0.17
Stock return	0.03	-0.01	-0.02	0.06	-0.17	0.15	1.00	-0.04	-0.15	-0.07
Earnings volatility	0.04	-0.18	-0.25	-0.26	-0.10	-0.56	-0.04	1.00	0.37	0.17
Loss	0.05	-0.24	-0.29	-0.40	0.03	-0.61	-0.15	0.37	1.00	0.20
Class action litigation risk	-0.12	-0.03	-0.01	0.09	-0.03	-0.17	-0.07	0.17	0.20	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 Credit Risk Retention on Management Forecast Frequency**

	(1)	(2)
Treatment Effect	-0.0034 (0.22)	-0.0871*** (6.30)
Institutional ownership		0.4456*** (17.00)
Firm size		0.1268*** (26.33)
Book-to-market		-0.0801*** (8.16)
ROA		0.0982*** (3.80)
Stock return		-0.0875*** (6.32)
Earnings volatility		-0.1027*** (5.27)
Loss		-0.0761*** (4.30)
Class action litigation risk		-0.1826*** (6.85)
N	14,397	14,397
R ²	0.0000	0.2263

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