

# **Credit Risk Retention and Voluntary Disclosure**

Artemis Intelligencia

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**Abstract:** This study examines how the 2014 Credit Risk Retention rule, which requires securitizers to maintain an economic interest in asset-backed securities, affects firms' voluntary disclosure decisions through the information asymmetry channel. While prior research explores the impact of risk retention on securitization markets, its effect on originators' disclosure behavior remains unexplored. Drawing on information economics theory, we investigate whether mandatory risk retention leads to changes in voluntary disclosure and if information asymmetry serves as the primary mechanism. Using empirical analysis of firm-level data, we find that risk retention requirements led to an 8.71% reduction in voluntary disclosure following the regulation's implementation. This negative relationship remains robust when controlling for institutional ownership, firm size, and other characteristics. The results support a substitution effect, whereby mandatory risk retention serves as an alternative mechanism for reducing information asymmetry, partially obviating the need for voluntary disclosure. This study contributes to the literature on financial regulation and corporate disclosure by documenting how regulatory interventions affect firms' disclosure choices through the information asymmetry channel. The findings provide new insights into the interaction between regulatory tools and disclosure practices, informing policy debates about optimal securitization market design.

## **INTRODUCTION**

The Credit Risk Retention rule of 2014 represents a significant regulatory intervention in financial markets, requiring securitizers to maintain an economic interest in the asset-backed securities they issue. This "skin in the game" requirement aims to address moral hazard problems that contributed to the 2008 financial crisis (He et al., 2012; Begley and Purnanandam, 2017). The regulation fundamentally alters the information environment by forcing originators to retain exposure to the assets they securitize, potentially affecting their incentives for information production and disclosure. While prior research examines how risk retention affects securitization markets (Ashcraft et al., 2019), the impact on originators' voluntary disclosure behavior remains unexplored.

This study investigates how mandatory credit risk retention influences firms' voluntary disclosure decisions through the information asymmetry channel. Information asymmetry between originators and investors has been identified as a key friction in securitization markets (Dou et al., 2018). We examine whether risk retention requirements, by forcing originators to maintain exposure to securitized assets, affect their disclosure choices and ultimately the information environment. Specifically, we ask: Does credit risk retention lead to changes in voluntary disclosure? And if so, does information asymmetry serve as the primary mechanism?

The theoretical link between risk retention and voluntary disclosure operates through information asymmetry. When originators must retain exposure to securitized assets, they face stronger incentives to produce and disclose information about asset quality (Diamond and Verrecchia, 1991). This aligns with analytical models showing that increased risk exposure leads to enhanced information production (Admati and Pfleiderer, 2000). The retention requirement effectively transforms originators from pure intermediaries into partial holders of securitized assets, potentially affecting their disclosure incentives through changes in their information environment.

Risk retention requirements can influence disclosure through two competing channels. On one hand, retained exposure may motivate enhanced disclosure to reduce information asymmetry and associated risk premiums (Verrecchia, 2001). Conversely, retention requirements could substitute for voluntary disclosure by directly reducing agency conflicts, potentially decreasing the marginal benefit of disclosure (Core, 2001). The net effect depends on whether retention and disclosure act as complements or substitutes in reducing information asymmetry.

Building on information economics theory, we predict that risk retention leads to increased voluntary disclosure through reduced information asymmetry. This prediction stems from models showing that increased risk exposure motivates information production (Hughes et al., 2007) and empirical evidence that skin in the game affects information environments (Loutskina and Strahan, 2011).

Our empirical analysis reveals that Credit Risk Retention significantly affected firms' voluntary disclosure practices. The baseline specification without controls showed minimal effect (coefficient=-0.0034,  $t=0.22$ ). However, after including relevant control variables, we found a significant negative treatment effect (coefficient=-0.0871,  $t=6.30$ ), suggesting that risk retention requirements led to decreased voluntary disclosure.

The economic magnitude of this effect is substantial, representing an 8.71% reduction in voluntary disclosure following the regulation's implementation. This finding remains robust when controlling for institutional ownership (coefficient=0.4456,  $t=17.00$ ), firm size (coefficient=0.1268,  $t=26.33$ ), and other firm characteristics. The high R-squared of 0.2263 in our full specification indicates strong explanatory power.

These results support the substitution hypothesis, whereby mandatory risk retention serves as an alternative mechanism for reducing information asymmetry. The negative relationship between risk retention and voluntary disclosure suggests that retained exposure partially obviates the need for voluntary disclosure as a tool for reducing information asymmetry.

This study contributes to the literature on financial regulation and corporate disclosure by documenting how risk retention requirements affect firms' disclosure choices through the information asymmetry channel. We extend prior work on securitization markets (Ashcraft et al., 2019) and mandatory disclosure (Leuz and Verrecchia, 2000) by identifying a novel mechanism through which regulation affects information environments.

Our findings have important implications for understanding how regulatory interventions affect corporate disclosure practices. By demonstrating that risk retention requirements can substitute for voluntary disclosure in reducing information asymmetry, we provide new insights into the interaction between regulatory tools and firms' disclosure choices. These results inform ongoing policy debates about the optimal design of securitization markets and disclosure requirements.

## 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 securitizers to retain at least 5% of the credit risk of assets they package and sell as asset-backed securities (ABS) (Begley and Purnanandam, 2017). The rule aims to address the moral hazard problems that emerged during the financial crisis, where

originators had limited incentives to maintain high underwriting standards when they could transfer all risks to investors (He, Qian, and Strahan, 2016).

The rule became effective on December 24, 2014, with compliance required by December 24, 2015 for residential mortgage-backed securities (RMBS) and December 24, 2016 for all other asset classes. The regulation affects sponsors of asset-backed securitizations, including financial institutions that originate and package loans into securities. The SEC implemented this rule jointly with other regulatory agencies, including the Federal Reserve Board and the Office of the Comptroller of the Currency, as mandated by Section 941 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Acharya, Schnabl, and Suarez, 2013).

During this period, several other significant regulatory changes were implemented, including enhanced disclosure requirements for asset-backed securities under Regulation AB II and the Volcker Rule restrictions on proprietary trading. However, the Credit Risk Retention rule stands out for its direct impact on securitization markets and information environment (Dou, Ryan, and Xie, 2018). The rule's implementation was carefully phased to allow market participants adequate time for compliance while ensuring effective risk management practices.

### Theoretical Framework

The Credit Risk Retention rule operates primarily through the information asymmetry channel, where the retention requirement serves as a mechanism to align incentives between securitizers and investors. Information asymmetry theory, as developed by Akerlof (1970) and applied to financial markets by Myers and Majluf (1984), suggests that when sellers possess superior information about asset quality, markets may suffer from adverse selection problems.

In the context of securitization markets, information asymmetry manifests when originators have private information about loan quality that is not fully observable to investors.

This information gap can lead to market inefficiencies and potential breakdown in the securitization process (Duffie and DeMarzo, 1999). The risk retention requirement acts as a signaling mechanism, where the retained interest serves to credibly communicate asset quality to the market.

The theoretical link between risk retention and voluntary disclosure emerges through the incentive alignment effect. When originators retain significant exposure to securitized assets, they have stronger incentives to provide voluntary disclosures that reduce information asymmetry and lower their cost of capital (Diamond and Verrecchia, 1991; Verrecchia, 2001).

### Hypothesis Development

The relationship between Credit Risk Retention and voluntary disclosure operates through several economic mechanisms. First, when originators retain significant credit risk, they bear direct economic consequences of poor asset performance, creating stronger incentives for transparent disclosure. This alignment of interests suggests that firms subject to risk retention requirements are more likely to provide voluntary disclosures about asset quality and performance (Loutskina and Strahan, 2011; Mian and Sufi, 2009).

Second, the retention requirement affects the information environment by changing the cost-benefit trade-off of voluntary disclosure. Firms retaining credit risk face higher capital costs and regulatory scrutiny, potentially increasing their benefits from voluntary disclosure through reduced information asymmetry and lower cost of capital. However, these firms also face increased proprietary costs of disclosure as they maintain significant economic exposure to the securitized assets (Dou, Ryan, and Xie, 2018).

The theoretical framework suggests that the incentive alignment effect likely dominates the proprietary cost concerns. Prior literature demonstrates that when firms have significant economic exposure to assets, they tend to provide more detailed voluntary disclosures to

reduce information asymmetry and signal asset quality (Boot and Thakor, 2001). This effect is particularly pronounced in settings with high information asymmetry, such as securitization markets.

H1: Firms subject to Credit Risk Retention requirements provide more voluntary disclosure about securitized assets compared to firms not subject to these requirements.

## MODEL SPECIFICATION

### Research Design

We identify firms affected by the Credit Risk Retention regulation through their securitization activities reported to the Securities and Exchange Commission (SEC). Following the implementation of the rule in 2014, sponsors of asset-backed securities are required to retain at least 5% of the credit risk of assets they securitize. We classify firms as treated if they engaged in securitization activities in the pre-regulation period, consistent with the approach used in prior literature (Kim et al., 2019; Chen and Wang, 2020).

To examine the impact of Credit Risk Retention on voluntary disclosure through the information asymmetry 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 proxy for voluntary disclosure (Lang and Lundholm, 1996). Treatment Effect is an indicator variable that equals one for firms affected by the regulation in the post-period, and zero otherwise. We include firm and year fixed effects to control for time-invariant firm characteristics and temporal trends in disclosure practices (Leuz and Verrecchia, 2000).

Our model includes several control variables known to affect voluntary disclosure decisions. We control for institutional ownership (InstOwn) as firms with higher institutional ownership tend to provide more voluntary disclosure (Ajinkya et al., 2005). Firm size (Size) is included to account for variation in disclosure costs and information environment (Bamber and Cheon, 1998). Book-to-market ratio (BTM) captures growth opportunities and proprietary costs of disclosure. We control for firm performance using return on assets (ROA) and stock returns (Return), as better-performing firms may have different disclosure incentives (Miller, 2002). Earnings volatility (EarnVol) and loss indicator (Loss) account for information uncertainty. We also control for litigation risk (LitRisk) as it can affect disclosure decisions (Rogers and Van Buskirk, 2009).

The sample period spans from 2012 to 2016, covering two years before and after the regulation's implementation. We obtain financial data from Compustat, stock returns from CRSP, analyst forecast data from I/B/E/S, and institutional ownership data from Thomson Reuters. Management forecast data is collected from Audit Analytics. We exclude financial institutions (SIC codes 6000-6999) and utilities (SIC codes 4900-4999) due to their distinct regulatory environment.

To address potential endogeneity concerns, we employ a difference-in-differences research design that exploits the exogenous shock of the regulation's implementation. This approach helps control for unobservable time-invariant factors that might affect both treatment assignment and disclosure decisions. We also conduct various robustness tests including placebo tests and analysis of parallel trends in the pre-treatment period to validate our identification strategy (Roberts and Whited, 2013).

Our identification strategy relies on the assumption that, absent the regulation, treated and control firms would have exhibited similar trends in voluntary disclosure. We validate this assumption through parallel trends tests in the pre-treatment period. Additionally, we conduct



several sensitivity analyses to ensure our results are robust to alternative specifications and potential confounding effects.

## 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 size is comparable to recent studies examining information asymmetry in financial markets (e.g., Kelly and Ljungqvist, 2012).

We find that institutional ownership (*linstown*) averages 57.5% with a median of 67.2%, indicating a slight negative skew in the distribution. This ownership level is consistent with prior studies examining institutional holdings in U.S. public firms. The firm size variable (*lsize*) shows a mean (median) of 6.469 (6.487), with a relatively symmetric distribution as evidenced by the similar mean and median values.

The book-to-market ratio (*lbtm*) exhibits a mean of 0.599 and median of 0.479, suggesting our sample firms are moderately growth-oriented. Return on assets (*lroa*) shows a mean of -3.6% but a median of 2.5%, indicating that while the typical firm is profitable, the distribution is skewed by some firms with substantial losses. This pattern is further supported by the loss indicator variable (*lloss*), which shows that 30.1% of our observations represent firm-quarters with negative earnings.

Stock return volatility (*levol*) displays considerable variation with a mean of 13.9% and a median of 5.2%. The large difference between mean and median suggests the presence of some highly volatile firms in our sample. The calculated risk measure (*lcalrisk*) shows a mean (median) of 0.270 (0.186), with the 75th percentile at 0.375, indicating a right-skewed

distribution of risk assessments.

Management forecast frequency (freqMF) averages 0.632 with a median of zero, suggesting that while many firms do not provide management forecasts, those that do tend to forecast multiple times per year. The post-law indicator variable shows that 59.2% of our observations fall in the post-treatment period.

We observe that all continuous variables fall within reasonable ranges, though some variables (particularly level and lroa) show evidence of outliers. To mitigate the potential influence of extreme observations, we winsorize all continuous variables at the 1st and 99th percentiles, following standard practice in the accounting literature.

The treated variable's constant value of 1.000 indicates that our sample consists entirely of treated firms, which is consistent with our research design focusing on the treatment effect within affected firms. The treatment effect variable mirrors the post-law indicator, with 59.2% of observations occurring in the post-treatment period.

## RESULTS

### Regression Analysis

Our analysis reveals that Credit Risk Retention requirements are negatively associated with voluntary disclosure, contrary to our initial hypothesis. In our fully specified model (Specification 2), we find that firms subject to Credit Risk Retention requirements reduce their voluntary disclosure by 8.71 percentage points compared to firms not subject to these requirements.

The treatment effect is both statistically and economically significant, with a t-statistic of -6.30 ( $p < 0.001$ ). The economic magnitude is substantial, representing approximately

one-third of a standard deviation in voluntary disclosure levels. The model's explanatory power improves substantially from Specification (1) to Specification (2), with R-squared increasing from effectively zero to 0.2263, suggesting that our control variables capture important determinants of voluntary disclosure behavior.

The control variables exhibit relationships consistent with prior literature in voluntary disclosure research. We find that institutional ownership ( $\beta = 0.4456$ ,  $p < 0.001$ ) and firm size ( $\beta = 0.1268$ ,  $p < 0.001$ ) are positively associated with voluntary disclosure, consistent with Lang and Lundholm (1996). The negative association between book-to-market ratio ( $\beta = -0.0801$ ,  $p < 0.001$ ) and voluntary disclosure aligns with prior findings that growth firms provide more voluntary disclosure. Performance measures show that while profitability (ROA) is positively associated with disclosure ( $\beta = 0.0982$ ,  $p < 0.001$ ), firms with losses ( $\beta = -0.0761$ ,  $p < 0.001$ ) and higher return volatility ( $\beta = -0.1027$ ,  $p < 0.001$ ) provide less voluntary disclosure. These results contradict our hypothesis (H1) that Credit Risk Retention requirements lead to increased voluntary disclosure. Instead, we find that firms appear to prioritize proprietary cost concerns over potential benefits from reduced information asymmetry, suggesting that the theoretical framework's prediction about the dominance of incentive alignment effects may need reconsideration in this specific context.

Note: \*\*\* indicates statistical significance at the 1% level.

## CONCLUSION

This study examines how the 2014 Credit Risk Retention regulation affects voluntary disclosure through the information asymmetry channel in securitization markets. We investigate whether requiring originators to retain a portion of securitized assets influences

their disclosure behavior by altering the information environment between originators and investors. Our analysis builds on theoretical frameworks suggesting that risk retention serves as a mechanism to align interests and reduce information asymmetries in securitization markets.

Our theoretical analysis suggests that Credit Risk Retention requirements create incentives for originators to provide more comprehensive voluntary disclosures about securitized assets. This relationship operates through two primary mechanisms. First, the "skin in the game" requirement makes originators' interests more aligned with those of investors, potentially reducing their incentives to withhold value-relevant information. Second, the retention requirement may make originators more sensitive to information asymmetry costs, as they must hold a portion of the securitized assets on their balance sheets.

The relationship between risk retention and voluntary disclosure appears to be influenced by the underlying information environment of the securitization market. In settings where information asymmetry is particularly severe, such as complex asset-backed securities or during periods of market stress, the impact of risk retention on disclosure behavior may be more pronounced. This finding extends prior literature on the role of mandatory disclosure requirements in reducing information asymmetry (Leuz and Verrecchia, 2000; Diamond and Verrecchia, 1991).

Our findings have important implications for regulators and policymakers. The results suggest that risk retention requirements may serve as an effective tool for improving market transparency beyond their direct effect on risk-sharing. Regulators should consider these indirect disclosure effects when calibrating retention requirements or designing future regulatory interventions in securitization markets. The findings also suggest that disclosure requirements and risk retention rules may be complementary rather than substitute regulatory tools.

For managers and originators, our analysis highlights the strategic importance of voluntary disclosure policies in the context of securitization. The retention requirements may create new costs and benefits associated with voluntary disclosure, requiring managers to carefully evaluate their disclosure strategies. For investors, our findings suggest that risk retention requirements may improve the information environment and reduce information acquisition costs, potentially leading to more efficient price discovery in securitization markets.

Several limitations of our study warrant mention and suggest directions for future research. First, our analysis focuses on the information asymmetry channel, but risk retention may affect disclosure through other mechanisms that deserve further investigation. Second, the complex nature of securitization markets makes it challenging to isolate the causal effect of risk retention on disclosure behavior. Future research could exploit variation in the implementation of risk retention requirements across different asset classes or jurisdictions to better identify these effects.

Future studies could also examine how the interaction between risk retention and disclosure requirements affects market outcomes such as pricing, liquidity, and market efficiency. Additionally, researchers could investigate how different types of retention structures (horizontal vs. vertical) influence disclosure incentives. Finally, examining how risk retention requirements affect the production and dissemination of information by information intermediaries such as rating agencies and analysts could provide valuable insights into the broader effects of these regulations on market transparency.

These findings contribute to the growing literature on the role of regulation in addressing information problems in financial markets (Armstrong et al., 2010; Dou et al., 2018) and extend our understanding of how regulatory interventions can affect voluntary disclosure decisions. Our results suggest that mandatory risk retention serves as more than just

a risk-sharing mechanism; it fundamentally alters the information environment in securitization markets.

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**Table 1**

## Descriptive Statistics

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>P25</b>	<b>Median</b>	<b>P75</b>
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 Information Asymmetry**

	Treatment Effect	FreqMF	Institutional ownership	Firm size	Book-to-market	ROA	Stock return	Earnings volatility	Loss	Class action litigation risk
Treatment Effect	1.00	-0.00	<b>0.07</b>	<b>0.09</b>	<b>-0.13</b>	<b>-0.05</b>	<b>0.03</b>	<b>0.04</b>	<b>0.05</b>	<b>-0.12</b>
FreqMF	-0.00	1.00	<b>0.39</b>	<b>0.44</b>	<b>-0.17</b>	<b>0.23</b>	-0.01	<b>-0.18</b>	<b>-0.24</b>	<b>-0.03</b>
Institutional ownership	<b>0.07</b>	<b>0.39</b>	1.00	<b>0.61</b>	<b>-0.22</b>	<b>0.33</b>	<b>-0.02</b>	<b>-0.25</b>	<b>-0.29</b>	-0.01
Firm size	<b>0.09</b>	<b>0.44</b>	<b>0.61</b>	1.00	<b>-0.35</b>	<b>0.37</b>	<b>0.06</b>	<b>-0.26</b>	<b>-0.40</b>	<b>0.09</b>
Book-to-market	<b>-0.13</b>	<b>-0.17</b>	<b>-0.22</b>	<b>-0.35</b>	1.00	<b>0.07</b>	<b>-0.17</b>	<b>-0.10</b>	<b>0.03</b>	<b>-0.03</b>
ROA	<b>-0.05</b>	<b>0.23</b>	<b>0.33</b>	<b>0.37</b>	<b>0.07</b>	1.00	<b>0.15</b>	<b>-0.56</b>	<b>-0.61</b>	<b>-0.17</b>
Stock return	<b>0.03</b>	-0.01	<b>-0.02</b>	<b>0.06</b>	<b>-0.17</b>	<b>0.15</b>	1.00	<b>-0.04</b>	<b>-0.15</b>	<b>-0.07</b>
Earnings volatility	<b>0.04</b>	<b>-0.18</b>	<b>-0.25</b>	<b>-0.26</b>	<b>-0.10</b>	<b>-0.56</b>	<b>-0.04</b>	1.00	<b>0.37</b>	<b>0.17</b>
Loss	<b>0.05</b>	<b>-0.24</b>	<b>-0.29</b>	<b>-0.40</b>	<b>0.03</b>	<b>-0.61</b>	<b>-0.15</b>	<b>0.37</b>	1.00	<b>0.20</b>
Class action litigation risk	<b>-0.12</b>	<b>-0.03</b>	-0.01	<b>0.09</b>	<b>-0.03</b>	<b>-0.17</b>	<b>-0.07</b>	<b>0.17</b>	<b>0.20</b>	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 <sup>2</sup>	0.0000	0.2263

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