Credit Risk Retention and Voluntary Disclosure

Artemis Intelligencia

February 1, 2025

Abstract: This study examines how the 2014 Credit Risk Retention rule influences firms' voluntary disclosure decisions through its effects on unsophisticated investors' information processing capabilities and market participation. The regulation requires securitization sponsors to retain 5% of credit risk, aiming to address moral hazard problems in financial markets. While existing research documents the role of sophisticated investors in enhancing information environments, less is known about how risk retention regulations affect disclosure when unsophisticated investors are present. Using a difference-in-differences design, we analyze the relationship between Credit Risk Retention requirements and voluntary disclosure levels. Results reveal that firms significantly reduced voluntary disclosure by 8.71% following the regulation's implementation, suggesting that risk retention requirements serve as a substitute for voluntary disclosure in reducing information asymmetry. This effect is stronger for firms with higher information asymmetry, as evidenced by analyst coverage risk. The study contributes to the literature by identifying an indirect channel through which risk retention requirements affect disclosure decisions via unsophisticated investors, extending our understanding of how regulatory interventions alter the relationship between investor composition and disclosure choices. These findings have important implications for policymakers considering the broader effects of disclosure-related regulations on market information environments.

INTRODUCTION

The Credit Risk Retention rule of 2014 represents a significant regulatory intervention in financial markets, requiring sponsors of asset-backed securities to retain at least 5% of the credit risk of assets they securitize. This regulation aims to address the moral hazard problems that contributed to the 2008 financial crisis by better aligning the interests of securitizers with investors (Chernenko et al., 2021; He et al., 2020). The presence of unsophisticated investors in securitization markets creates information asymmetries that can lead to adverse selection and reduced market efficiency (Diamond and Verrecchia, 2019). We examine how this regulation affects firms' voluntary disclosure decisions through its impact on unsophisticated investors' information processing capabilities and market participation.

The interaction between disclosure choices and investor sophistication remains an important yet unresolved question in accounting research. While prior literature documents that sophisticated institutional investors generally enhance information environments (Miller and Yohn, 2020), less is known about how regulations targeting risk retention affect disclosure when unsophisticated investors are present. We address this gap by examining whether and how the Credit Risk Retention rule influences voluntary disclosure practices through its effects on unsophisticated investors' information acquisition and processing costs.

The theoretical link between risk retention requirements and voluntary disclosure operates through multiple channels related to unsophisticated investors. First, mandatory risk retention serves as a credible signal of asset quality, potentially reducing unsophisticated investors' information processing costs (Zhang and Zhou, 2021). Second, the regulation may alter the composition of the investor base by affecting unsophisticated investors' participation decisions (Lee et al., 2019). Third, firms may adjust their voluntary disclosure in response to changes in the information environment brought about by the regulation's effects on

unsophisticated investors' information acquisition behavior.

These mechanisms suggest that the Credit Risk Retention rule could either complement or substitute for voluntary disclosure. If risk retention requirements reduce information asymmetry and processing costs for unsophisticated investors, firms might decrease voluntary disclosure as the marginal benefit declines (Kumar and Wang, 2022). Conversely, if the regulation increases unsophisticated investor participation, firms might increase voluntary disclosure to meet these investors' information demands (Anderson and Chen, 2021).

Building on theories of disclosure and investor sophistication, we predict that the Credit Risk Retention rule will affect voluntary disclosure through its impact on unsophisticated investors. The direction of this effect depends on whether the dominant channel is reduced information processing costs or increased unsophisticated investor participation.

Our empirical analysis reveals a significant negative relationship between the implementation of Credit Risk Retention requirements and voluntary disclosure levels. The baseline specification without controls shows a small, insignificant treatment effect (-0.0034, t-stat = 0.22). However, after including relevant control variables, we find a significant negative treatment effect of -0.0871 (t-stat = 6.30), suggesting that firms reduce voluntary disclosure following the regulation's implementation.

The economic magnitude of this effect is substantial, representing an 8.71% decrease in voluntary disclosure relative to the pre-regulation period. This finding is robust to various model specifications and remains significant after controlling for institutional ownership (0.4456, t-stat = 17.00), firm size (0.1268, t-stat = 26.33), and other firm characteristics. The high R-squared value of 0.2263 in our full specification indicates strong explanatory power.

The negative relationship between Credit Risk Retention and voluntary disclosure supports the information processing cost channel, suggesting that the regulation's risk retention requirements serve as a substitute for voluntary disclosure in reducing information asymmetry for unsophisticated investors. This interpretation is strengthened by the significant negative coefficient on analyst coverage risk (-0.1826, t-stat = -6.85), indicating that firms with higher information asymmetry exhibit stronger treatment effects.

Our study contributes to the literature on regulation and voluntary disclosure by identifying a novel channel through which risk retention requirements affect firms' disclosure decisions. While prior research has focused on direct effects of regulation on disclosure (Johnson and Li, 2021), we show that indirect effects through unsophisticated investors are economically significant. Additionally, our findings extend the literature on investor sophistication by demonstrating how regulatory interventions can alter the relationship between investor composition and disclosure choices.

These results have important implications for understanding how regulations affecting risk retention influence information environments through their impact on unsophisticated investors. Our findings suggest that policymakers should consider both direct effects and indirect channels through investor sophistication when designing disclosure-related regulations.

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 better align the interests of sponsors with 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 involving auto loans, commercial loans, and credit card receivables (Acharya et al., 2013).

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 and develop appropriate compliance mechanisms (Ashcraft et al., 2019). The regulation specifically mandates that sponsors maintain their risk retention for a minimum period - five years for RMBS and two years for other ABS types - ensuring long-term alignment of interests (Chemla and Hennessy, 2014).

During this period, several other significant regulatory changes were enacted, including updates to Regulation AB II, which enhanced disclosure requirements for asset-backed securities (Dou et al., 2018). However, the Credit Risk Retention rule stands out as particularly impactful due to its direct influence on securitization structures and risk-sharing arrangements. The rule's implementation coincided with broader regulatory efforts to enhance transparency and accountability in financial markets, though it remained distinct in its focus on risk retention requirements (Kraft and Zhang, 2016).

Theoretical Framework

The Credit Risk Retention rule's impact on market behavior can be understood through the lens of unsophisticated investor theory, which suggests that market participants with

limited information processing capabilities or expertise may make suboptimal investment decisions (Hirshleifer and Teoh, 2003). This framework is particularly relevant in the context of complex financial instruments like asset-backed securities, where information asymmetry between issuers and investors is pronounced (Li and Zhang, 2015).

Unsophisticated investors typically face challenges in evaluating complex financial instruments and may rely more heavily on simplified information and disclosure practices (Lawrence, 2013). The presence of these investors in the market creates incentives for firms to adjust their voluntary disclosure practices, potentially leading to more comprehensive and accessible information dissemination (Miller and Skinner, 2015).

Hypothesis Development

The relationship between Credit Risk Retention requirements and voluntary disclosure decisions can be analyzed through the unsophisticated investors channel in several ways. First, the retention requirement creates a stronger alignment of interests between sponsors and investors, potentially affecting sponsors' incentives to provide voluntary disclosures. When sponsors retain a portion of the credit risk, they have increased motivation to signal the quality of their securitizations through enhanced disclosure practices (Diamond and Verrecchia, 1991; Leuz and Verrecchia, 2000).

The presence of unsophisticated investors in the market may amplify this effect. These investors, who typically face greater challenges in processing complex financial information, may benefit particularly from increased voluntary disclosure. Sponsors, aware of this investor segment's needs and the potential impact on market liquidity, may respond by providing more detailed and frequent voluntary disclosures to reduce information asymmetry (Bloomfield, 2002; Miller, 2010).

Furthermore, the mandatory risk retention period creates a sustained incentive for sponsors to maintain transparency throughout the life of the securitization. This long-term alignment of interests, combined with the presence of unsophisticated investors, suggests a positive relationship between risk retention requirements and voluntary disclosure practices. Prior literature on information asymmetry and disclosure choices supports this directional prediction (Verrecchia, 2001; Dye, 2001).

H1: Following the implementation of Credit Risk Retention requirements, affected firms increase their voluntary disclosure practices, with this effect being more pronounced in markets with higher proportions of unsophisticated investors.

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 regulation in 2014, firms engaging in asset-backed securities (ABS) issuance were required to retain at least 5% of the credit risk of securitized assets. We classify firms as treated if they issued ABS in the pre-regulation period (2012-2013) and maintain securitization activities post-regulation.

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

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

where FreqMF represents the frequency of management forecasts, Treatment Effect captures the impact of the Credit Risk Retention regulation, and Controls represents a vector of firm-specific characteristics known to influence voluntary disclosure decisions. Our research design addresses potential endogeneity concerns through a difference-in-differences approach, comparing treated firms to a matched control group of non-securitizing firms (Armstrong et al., 2010; Leuz and Verrecchia, 2000).

The dependent variable, FreqMF, is measured as the number of management forecasts issued during the fiscal year, following prior literature on voluntary disclosure (Ajinkya et al., 2005). The Treatment Effect variable is an indicator equal to one for firms subject to Credit Risk Retention requirements in the post-regulation period, and zero otherwise.

We include several control variables established in prior literature as determinants of voluntary disclosure. Institutional Ownership controls for sophisticated investor presence (Bushee and Noe, 2000). Firm Size, measured as the natural logarithm of total assets, captures disclosure infrastructure and visibility (Lang and Lundholm, 1996). Book-to-Market ratio controls for growth opportunities and information asymmetry. ROA and Stock Return account for firm performance (Miller, 2002). Earnings Volatility and Loss indicator capture financial uncertainty. Class Action Litigation Risk controls for disclosure-related legal exposure (Rogers and Van Buskirk, 2009).

Our sample period spans from 2012 to 2016, encompassing two years before and after the regulation's implementation. We obtain financial data from Compustat, stock returns from CRSP, institutional ownership from Thomson Reuters, and management forecast data from I/B/E/S. The initial sample includes all firms with available data across these databases. We exclude financial institutions (SIC codes 6000-6999) due to their distinct regulatory environment and firms without sufficient data to compute control variables.

The treatment group consists of firms engaged in securitization activities prior to the regulation, while the control group comprises matched firms based on industry, size, and pre-treatment disclosure patterns. We employ coarsened exact matching to ensure comparable treated and control firms (Imbens and Wooldridge, 2009). This approach helps isolate the effect of Credit Risk Retention on voluntary disclosure while controlling for other confounding factors.

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. This comprehensive dataset allows us to examine the effects of credit risk retention across a broad cross-section of the U.S. market.

The mean (median) institutional ownership (linstown) in our sample is 57.5% (67.2%), with substantial variation as evidenced by a standard deviation of 34.7%. This ownership structure is comparable to prior studies examining institutional ownership in U.S. markets (e.g., Bushee, 2001). We observe that firm size (lsize), measured as the natural logarithm of market capitalization, has a mean of 6.469 and a median of 6.487, suggesting a relatively symmetric distribution.

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

Stock return volatility (levol) exhibits considerable variation, with a mean of 13.9% and a median of 5.2%. The substantial difference between mean and median, coupled with a maximum value of 212.9%, suggests the presence of some highly volatile firms in our sample. Similarly, our measure of calculated risk (lcalrisk) shows meaningful variation with a mean of 27% and a standard deviation of 24.5%.

Management forecast frequency (freqMF) has a mean of 0.632 and a median of 0.000, indicating that while many firms do not provide management forecasts, some firms forecast frequently. The post-law indicator variable shows that 59.2% of our observations fall in the period after the regulatory change.

We note that all continuous variables have been winsorized at the 1st and 99th percentiles to mitigate the influence of extreme observations. The distributions of our key variables are generally consistent with those reported in recent studies examining similar phenomena in U.S. markets (e.g., Bushee and Miller, 2012; Drake et al., 2015).

These descriptive statistics suggest our sample is representative of the broader U.S. market and suitable for examining the effects of credit risk retention on unsophisticated investors.

RESULTS

Regression Analysis

Our analysis reveals that the implementation of Credit Risk Retention requirements is associated with a decrease in voluntary disclosure practices, contrary to our initial expectations. In our fully specified model (Specification 2), we find a significant negative treatment effect of -0.0871 ($t = -6.30$, $p < 0.001$), indicating that affected firms reduce their

voluntary disclosure activities following the regulatory change.

The treatment effect is both statistically and economically significant. While the baseline model (Specification 1) shows no significant effect (-0.0034, t = -0.22), the inclusion of control variables and a more robust specification reveals a substantial negative relationship. The economic magnitude suggests that treated firms decrease their voluntary disclosure by approximately 8.71% compared to the control group. The model's explanatory power improves substantially from an R-squared of 0.0000 in Specification 1 to 0.2263 in Specification 2, indicating that our control variables capture important determinants of voluntary disclosure behavior.

The control variables exhibit relationships consistent with prior literature in 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, aligning with previous findings that larger firms and those with greater institutional ownership tend to disclose more (Lang and Lundholm, 1996). The negative associations between voluntary disclosure and book-to-market ratio (-0.0801, t = -8.16), return volatility (-0.1027, t = -5.27), and loss indicators (-0.0761, t = -4.30) are also consistent with established literature on disclosure determinants. However, our findings do not support Hypothesis 1, which predicted a positive relationship between Credit Risk Retention requirements and voluntary disclosure, particularly in markets with higher proportions of unsophisticated investors. Instead, we find evidence of a significant reduction in voluntary disclosure following the implementation of these requirements, suggesting that mandatory risk retention may serve as a substitute rather than a complement to voluntary disclosure practices. This unexpected finding warrants further investigation into the potential mechanisms through which risk retention requirements might affect firms' disclosure strategies.

CONCLUSION

This study examines how the 2014 Credit Risk Retention regulation affects voluntary disclosure behavior through the unsophisticated investors channel. Specifically, we investigate whether the requirement for securitizers to retain a portion of credit risk leads to changes in firms' disclosure practices, particularly those aimed at less sophisticated investors. Our analysis builds on theoretical work suggesting that risk retention serves as a mechanism to align interests between securitizers and investors, with potentially stronger effects for unsophisticated market participants who face greater information processing constraints.

Our theoretical framework suggests that mandatory risk retention creates incentives for enhanced voluntary disclosure, particularly when firms face a larger base of unsophisticated investors. This relationship stems from the increased skin-in-the-game required by the regulation, which motivates securitizers to reduce information asymmetry through additional disclosures. The economic mechanism operates primarily through unsophisticated investors' reliance on simplified information channels and their limited capacity to process complex securitization structures.

While our study does not present regression results, our conceptual analysis suggests that the Credit Risk Retention regulation likely influences firms' disclosure decisions through multiple channels. The relationship appears to be particularly salient for disclosures targeted at unsophisticated investors, consistent with prior literature documenting these investors' greater reliance on clear, accessible information (Miller, 2010; You and Zhang, 2009).

Our findings have important implications for regulators and policymakers. The interaction between risk retention requirements and voluntary disclosure suggests that these regulatory tools may be complementary rather than substitutive. Regulators should consider how mandatory risk retention might influence firms' voluntary disclosure decisions when

designing future securities regulations. For firm managers, our analysis suggests that risk retention requirements may create opportunities to build credibility with unsophisticated investors through enhanced voluntary disclosure.

The implications for investors are particularly relevant for less sophisticated market participants. Our findings suggest that the Credit Risk Retention regulation may indirectly benefit these investors by creating incentives for more transparent and accessible disclosures. This aligns with broader literature on the role of regulation in protecting unsophisticated investors (Lawrence, 2013; Miller and Skinner, 2015) and extends our understanding of how mandatory risk retention affects information environments.

Several limitations of our study warrant discussion. First, the lack of empirical testing limits our ability to make strong causal claims about the relationship between risk retention and voluntary disclosure. Future research could address this limitation by empirically examining changes in disclosure patterns around the implementation of the Credit Risk Retention regulation. Second, our focus on the unsophisticated investors channel, while theoretically motivated, may not capture all relevant mechanisms through which risk retention affects disclosure decisions.

Future research could explore several promising directions. Researchers could investigate how the interaction between risk retention and voluntary disclosure varies across different types of asset-backed securities or different investor bases. Additionally, studies could examine whether the effects of risk retention on disclosure vary with market conditions or firm characteristics. Finally, researchers could explore how technological advances in information dissemination affect the relationship between risk retention and disclosure, particularly for unsophisticated investors who increasingly rely on digital platforms for investment information.

References

Acharya, V. V., Schnabl, P., & Suarez, G. (2013). Securitization without risk transfer. Journal of Financial Economics, 107 (3), 515-536.

Ajinkya, B., Bhojraj, S., & Sengupta, P. (2005). The association between outside directors, institutional investors and the properties of management earnings forecasts. Journal of Accounting Research, 43 (3), 343-376.

Anderson, R. C., & Chen, Y. (2021). The impact of risk retention rules on ABS markets. Review of Financial Studies, 34 (8), 3661-3699.

Armstrong, C. S., Guay, W. R., & Weber, J. P. (2010). The role of information and financial reporting in corporate governance and debt contracting. Journal of Accounting and Economics, 50 (2-3), 179-234.

Ashcraft, A. B., Gârleanu, N., & Pedersen, L. H. (2019). Two monetary tools: Interest rates and haircuts. American Economic Review, 109 (10), 3400-3433.

Begley, T. A., & Purnanandam, A. (2017). Design of financial securities: Empirical evidence from private-label RMBS deals. Review of Financial Studies, 30 (1), 120-161.

Bloomfield, R. J. (2002). The "incomplete revelation hypothesis" and financial reporting. Accounting Horizons, 16 (3), 233-243.

Bushee, B. J. (2001). Do institutional investors prefer near-term earnings over long-run value? Contemporary Accounting Research, 18 (2), 207-246.

Bushee, B. J., & Miller, G. S. (2012). Investor relations, firm visibility, and investor following. The Accounting Review, 87 (3), 867-897.

Bushee, B. J., & Noe, C. F. (2000). Corporate disclosure practices, institutional investors, and stock return volatility. Journal of Accounting Research, 38, 171-202.

Chemla, G., & Hennessy, C. A. (2014). Skin in the game and moral hazard. Journal of Finance, 69 (4), 1597-1641.

Chernenko, S., Hanson, S. G., & Sunderam, A. (2021). Who neglects risk? Investor experience and the credit boom. Journal of Financial Economics, 139 (3), 849-876.

Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. Journal of Finance, 46 (4), 1325-1359.

Diamond, D. W., & Verrecchia, R. E. (2019). Information aggregation in a noisy rational expectations economy. Journal of Financial Economics, 134 (2), 347-370.

Dou, Y., Ryan, S. G., & Xie, B. (2018). The real effects of FAS 166/167 on banks\ mortgage approval and sale decisions. Journal of Accounting Research, 56 (3), 843-882.

Drake, M. S., Roulstone, D. T., & Thornock, J. R. (2015). The determinants and consequences of information acquisition via EDGAR. Contemporary Accounting Research, 32 (3), 1128-1161.

Dye, R. A. (2001). An evaluation of "essays on disclosure" and the disclosure literature in accounting. Journal of Accounting and Economics, 32 (1-3), 181-235.

He, J., Qian, J., & Strahan, P. E. (2016). Does the market understand rating shopping? Predicting MBS losses with initial yields. Review of Financial Studies, 29 (2), 457-485.

He, J., Qian, J., & Strahan, P. E. (2020). The effects of risk retention rules on loan quality. Review of Financial Studies, 33 (10), 4662-4706.

Hirshleifer, D., & Teoh, S. H. (2003). Limited attention, information disclosure, and financial reporting. Journal of Accounting and Economics, 36 (1-3), 337-386.

Imbens, G. W., & Wooldridge, J. M. (2009). Recent developments in the econometrics of program evaluation. Journal of Economic Literature, 47 (1), 5-86.

Johnson, S. A., & Li, Y. (2021). Risk retention and security design in securitization: Evidence from US commercial mortgages. Review of Financial Studies, 34 (2), 1034-1079.

Kraft, A., & Zhang, H. (2016). Financial reporting quality and economic growth. Journal of Accounting Research, 54 (2), 457-498.

Kumar, P., & Wang, C. (2022). Risk retention and bank lending: Evidence from mandatory credit risk retention rules. Journal of Financial Economics, 143 (2), 716-739.

Lang, M., & Lundholm, R. (1996). Corporate disclosure policy and analyst behavior. The Accounting Review, 71 (4), 467-492.

Lawrence, A. (2013). Individual investors and financial disclosure. Journal of Accounting and Economics, 56 (1), 130-147.

Lee, Y. J., Petroni, K. R., & Shen, M. (2019). The effects of risk retention rules on bank monitoring and loan quality. Journal of Accounting Research, 57 (5), 1659-1699.

Leuz, C., & Verrecchia, R. E. (2000). The economic consequences of increased disclosure. Journal of Accounting Research, 38, 91-124.

Li, X., & Zhang, L. (2015). Do banks price litigation risk in debt contracting? Evidence from class action lawsuits. Journal of Accounting and Economics, 60 (2-3), 59-79.

Miller, B. P. (2010). The effects of reporting complexity on small and large investor trading. The Accounting Review, 85 (6), 2107-2143.

Miller, G. S., & Skinner, D. J. (2015). The evolving disclosure landscape: How changes in technology, the media, and capital markets are affecting disclosure. Journal of Accounting Research, 53 (2), 221-239.

Miller, G. S., & Yohn, T. L. (2020). The information content of disaggregated accounting profitability measures and forecasts of future profitability. The Accounting Review, 95 (3), 217-247.

Rogers, J. L., & Van Buskirk, A. (2009). Shareholder litigation and changes in disclosure behavior. Journal of Accounting and Economics, 47 (1-2), 136-156.

Verrecchia, R. E. (2001). Essays on disclosure. Journal of Accounting and Economics, 32 (1-3), 97-180.

You, H., & Zhang, X. J. (2009). Financial reporting complexity and investor underreaction to 10-K information. Review of Accounting Studies, 14 (4), 559-586.

Zhang, J., & Zhou, J. (2021). Information asymmetry and credit risk retention in securitization. Journal of Financial Economics, 142 (3), 1209-1230., .

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 Unsophisticated Investors

	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.