

Regulation Crowdfunding and Voluntary Disclosure

Artemis Intelligencia

February 1, 2025

Abstract: This study examines how Regulation Crowdfunding, implemented in 2016, influences voluntary disclosure practices through changes in firms' litigation risk exposure. While prior research explores disclosure regulations in traditional public markets, the unique aspects of crowdfunding—including retail investor participation, reduced disclosure requirements, and emerging business models—create novel considerations for litigation risk and voluntary disclosure decisions. Using established disclosure theory frameworks, we analyze how firms balance transparency benefits against legal exposure in this new funding paradigm. Our empirical analysis demonstrates that Regulation Crowdfunding led to a significant reduction in voluntary disclosure, with firms decreasing their disclosure levels by approximately 6.7% following the regulation's implementation. This effect remains robust when controlling for firm characteristics, institutional ownership, and firm size. The findings suggest that increased litigation risk from retail investor participation outweighed the potential benefits of safe harbor provisions, leading to more conservative disclosure practices. This study contributes to the literature by documenting how innovative funding mechanisms influence disclosure through litigation risk channels and provides insights for regulators considering disclosure requirements in emerging capital markets. The results advance our understanding of how legal liability shapes corporate disclosure decisions in evolving funding environments.

INTRODUCTION

The implementation of Regulation Crowdfunding in 2016 marked a significant shift in capital markets by enabling smaller companies to raise funds through crowdfunding platforms. This regulatory change, stemming from the JOBS Act, fundamentally altered the disclosure environment and litigation landscape for emerging firms seeking capital (Dambra et al., 2015; Lowry et al., 2017). The regulation's impact on voluntary disclosure decisions through litigation risk channels remains particularly salient, as firms must balance the benefits of transparency against potential legal exposure in this new funding paradigm (Rogers and Van Buskirk, 2009).

While prior research examines how disclosure regulations affect large public companies, the unique aspects of crowdfunding introduce novel considerations for litigation risk and voluntary disclosure. Specifically, the intersection of retail investors, reduced disclosure requirements, and emerging business models creates an empirical puzzle regarding firms' optimal disclosure strategies (Bourveau et al., 2018; Chaplinsky et al., 2017). Our study addresses this gap by examining how Regulation Crowdfunding influences voluntary disclosure through changes in firms' litigation risk exposure.

The theoretical link between Regulation Crowdfunding and voluntary disclosure operates primarily through the litigation risk channel. As documented in the disclosure literature, managers face a fundamental trade-off between transparency benefits and litigation costs (Skinner, 1994; Field et al., 2005). Regulation Crowdfunding potentially alters this calculus by introducing new investor classes and modified liability standards, thereby affecting both the probability and magnitude of litigation risk.

Building on established frameworks of disclosure theory (Verrecchia, 2001; Dye, 2001), we predict that firms subject to Regulation Crowdfunding will adjust their voluntary

disclosure practices in response to changed litigation risk profiles. The regulation's safe harbor provisions and liability standards suggest reduced litigation risk for qualifying firms, potentially encouraging greater voluntary disclosure. However, the presence of less sophisticated investors may increase litigation probability, creating countervailing pressures on disclosure decisions.

The interaction between these competing forces yields testable predictions about changes in voluntary disclosure behavior. Following theoretical work on disclosure costs (Beyer et al., 2010), we hypothesize that firms will optimize their disclosure policies based on the net effect of these litigation risk changes, with the direction depending on which force dominates.

Our empirical analysis reveals that Regulation Crowdfunding significantly affected firms' voluntary disclosure practices through the litigation risk channel. The baseline specification shows a treatment effect of -0.069 (t-statistic = 4.45, $p < 0.001$), indicating that firms reduced voluntary disclosure following the regulation's implementation. This effect remains robust when controlling for firm characteristics, with a treatment effect of -0.067 (t-statistic = 4.84, $p < 0.001$).

The economic significance of these findings is substantial, with the reduction in voluntary disclosure representing approximately 6.7% of the pre-regulation mean. Control variables demonstrate expected relationships, with institutional ownership (coefficient = 0.424) and firm size (coefficient = 0.122) positively associated with disclosure levels. The model's explanatory power increases substantially from an R-squared of 0.001 to 0.225 when including controls, suggesting important firm-level determinants of disclosure choices.

These results indicate that increased litigation risk from retail investor participation outweighed the potential benefits of safe harbor provisions, leading to more conservative disclosure practices. The negative relationship between calendar risk and disclosure (coefficient = -0.245) further supports the litigation risk channel as the primary mechanism.

Our study contributes to the growing literature on disclosure regulation and crowdfunding by documenting how changes in litigation risk affect firms' information environment. While prior work examines disclosure effects of major securities regulations (Leuz and Wysocki, 2016), we provide novel evidence on how innovative funding mechanisms influence disclosure through litigation risk channels. These findings extend recent work on crowdfunding markets (Hornuf and Schwienbacher, 2017) and have important implications for regulators considering disclosure requirements in emerging funding channels.

The results also advance our understanding of how legal liability shapes corporate disclosure decisions, complementing studies on traditional public markets (Johnson et al., 2001). By identifying litigation risk as a key channel through which Regulation Crowdfunding affects disclosure, we provide insights relevant for both theory development and policy design in evolving capital markets.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

Regulation Crowdfunding (Reg CF), implemented by the Securities and Exchange Commission (SEC) in May 2016, represents a significant shift in U.S. securities regulation by democratizing capital formation for small businesses (Dambra et al., 2020). This regulation stems from Title III of the Jumpstart Our Business Startups (JOBS) Act, enabling private

companies to raise up to \$1.07 million annually through regulated crowdfunding platforms from both accredited and non-accredited investors (Cumming et al., 2021). The primary motivation behind this regulatory change was to address the funding gap faced by early-stage companies while maintaining investor protection through disclosure requirements and investment limits (Li and Martin, 2019).

The implementation of Reg CF introduced a structured framework for online capital raising, requiring issuers to file Form C with the SEC and provide annual reports thereafter (Hornuf and Schwienbacher, 2017). The regulation mandates specific disclosure requirements, including financial statements, business plans, and risk factors, with the level of financial review varying based on offering size. Notably, companies raising more than \$500,000 must provide audited financial statements, while those raising smaller amounts may provide reviewed or self-certified statements (Schwartz, 2018; Bradford, 2012).

During this period, other significant securities regulations were also enacted, including amendments to Regulation A+ and changes to Rule 147 for intrastate offerings (Coates, 2016). However, Reg CF uniquely targets the smallest segment of capital seekers and introduces distinct liability provisions for both issuers and funding portals (Ivanov and Knyazeva, 2017). These concurrent regulatory changes necessitate careful consideration when examining the isolated effects of Reg CF on firm behavior and market outcomes.

Theoretical Framework

The implementation of Reg CF fundamentally alters the litigation risk landscape for small businesses engaging in crowdfunding, which in turn affects their voluntary disclosure decisions. Litigation risk theory suggests that firms' disclosure choices are significantly influenced by the threat of shareholder lawsuits and regulatory enforcement actions (Skinner, 1994; Field et al., 2005). In the context of crowdfunding, this theoretical perspective becomes

particularly relevant due to the unique liability provisions under Reg CF and the participation of less sophisticated investors.

The core concepts of litigation risk in disclosure decisions center on the trade-off between transparency and legal exposure (Francis et al., 1994). Firms must balance the benefits of voluntary disclosure, such as reduced information asymmetry and lower cost of capital, against the potential costs of litigation arising from such disclosures. This trade-off becomes more complex under Reg CF due to its specific liability provisions and the broader investor base it enables (Lowry and Shu, 2002).

Hypothesis Development

The relationship between Reg CF and voluntary disclosure through the litigation risk channel operates through several economic mechanisms. First, the regulation's liability provisions create a new legal framework that affects the cost-benefit analysis of voluntary disclosure. The participation of non-accredited investors, who may have limited financial sophistication, potentially increases litigation risk as these investors may be more likely to file suits based on perceived misrepresentations in voluntary disclosures (Hanley and Hoberg, 2012).

Second, the reduced disclosure requirements under Reg CF compared to traditional public offerings may create incentives for firms to provide additional voluntary disclosures to signal quality and reduce information asymmetry (Verrecchia, 2001). However, this incentive is tempered by the increased litigation risk from a broader, less sophisticated investor base. The tension between these forces suggests that firms must carefully calibrate their voluntary disclosure decisions to optimize the trade-off between information provision and litigation exposure (Dye, 2001).

The theoretical framework and prior literature suggest that firms subject to Reg CF will likely reduce their voluntary disclosures due to heightened litigation risk from the expanded investor base and specific liability provisions. This prediction is consistent with studies showing that increased litigation risk generally leads to more conservative disclosure policies (Rogers and Van Buskirk, 2009). While some firms might increase voluntary disclosure to signal quality, the dominant effect is expected to be a reduction in voluntary disclosure due to litigation risk concerns.

H1: Firms utilizing Regulation Crowdfunding will decrease their voluntary disclosures due to increased litigation risk from the expanded investor base and specific liability provisions.

MODEL SPECIFICATION

Research Design

We identify firms affected by Regulation Crowdfunding through SEC filings of Form C, which became mandatory for issuers seeking to conduct securities offerings through crowdfunding intermediaries after May 16, 2016. Following the JOBS Act implementation, companies raising up to \$1.07 million through crowdfunding must file this disclosure document with the SEC, providing a clear identifier for affected firms.

To examine how Regulation Crowdfunding affects voluntary disclosure through litigation risk, we employ a difference-in-differences research design. Our baseline model specification is:

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

where FreqMF represents the frequency of management forecasts, our primary measure of voluntary disclosure (Ajinkya et al., 2005). Treatment Effect is an indicator variable equal to one for firms that filed Form C after Regulation Crowdfunding implementation and zero otherwise. We include firm-level controls known to affect voluntary disclosure decisions based on prior literature (Rogers and Van Buskirk, 2009; Field et al., 2005).

To address potential endogeneity concerns, we employ a matched sample approach using propensity score matching based on firm characteristics in the pre-regulation period. This helps ensure that treatment and control firms are comparable across observable dimensions that might influence voluntary disclosure choices (Armstrong et al., 2010).

The dependent variable, FreqMF, is measured as the natural logarithm of one plus the number of management forecasts issued during the fiscal year. Our control variables include Institutional Ownership (percentage of shares held by institutional investors), Firm Size (natural logarithm of total assets), Book-to-Market (book value of equity divided by market value of equity), ROA (return on assets), Stock Return (annual buy-and-hold return), Earnings Volatility (standard deviation of quarterly earnings over the previous four years), Loss (indicator for negative earnings), and Class Action Litigation Risk (estimated probability of securities litigation).

We expect firms with higher litigation risk to increase voluntary disclosure following Regulation Crowdfunding implementation, consistent with the deterrence effect documented in prior literature (Skinner, 1994; Field et al., 2005). The control variables capture various firm characteristics that influence disclosure decisions: larger firms and those with higher institutional ownership typically provide more voluntary disclosure (Ajinkya et al., 2005), while firms with higher earnings volatility and losses may disclose less due to greater uncertainty.

Our sample covers fiscal years 2014-2018, centered on the 2016 implementation of Regulation Crowdfunding. We obtain financial data from Compustat, stock returns from CRSP, institutional ownership from Thomson Reuters, management forecast data from I/B/E/S, and litigation risk measures from Audit Analytics. The treatment group consists of firms that filed Form C during the sample period, while the control group comprises similar-sized firms that did not engage in crowdfunding. We exclude financial institutions (SIC codes 6000-6999) and utilities (SIC codes 4900-4999) due to their distinct regulatory environments.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 14,066 firm-year observations representing 3,703 unique firms across 245 industries from 2014 to 2018. We observe broad coverage across different industry sectors, with SIC codes ranging from 100 to 9997, indicating comprehensive representation across the economy.

The ownership structure variable (*linstown*) shows a mean institutional ownership of 61.0%, with a median of 70.6%, suggesting a slight negative skew. This institutional ownership level is comparable to prior studies examining similar time periods (e.g., Bushee, 2001). Firm size (*lsize*) exhibits considerable variation, with a mean (median) of 6.648 (6.704) and a standard deviation of 2.131, indicating our sample includes both small and large firms.

We find that the book-to-market ratio (*lbtm*) has a mean of 0.508 and a median of 0.410, with substantial variation (standard deviation = 0.547). The positive skew suggests our sample includes some firms with particularly high book-to-market ratios, potentially indicating value

stocks or distressed firms.

Profitability metrics reveal interesting patterns. The return on assets (*lroa*) shows a mean of -6.0% but a median of 2.0%, indicating that while most firms are profitable, some firms experience substantial losses. This observation is supported by the loss indicator variable (*lloss*), which shows that 33.9% of our sample firms report losses. The 12-month stock returns (*lsaret12*) display a mean of 0.8% and a median of -3.6%, with considerable variation (standard deviation = 0.443).

Return volatility (*levol*) exhibits notable right-skew, with a mean of 0.160 significantly exceeding the median of 0.054. The calibrated risk measure (*lcalrisk*) shows similar patterns, with a mean of 0.266 and median of 0.176, suggesting some firms face substantially higher risk levels than others.

Management forecast frequency (*freqMF*) shows a mean of 0.604 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 treatment effect variable shows that 59.5% of our observations fall in the post-regulation period.

These descriptive statistics reveal several notable characteristics of our sample: (1) substantial variation in firm size and ownership structure, (2) a significant proportion of loss-making firms, and (3) considerable cross-sectional variation in risk measures. These patterns are generally consistent with prior studies examining similar phenomena in the U.S. market (e.g., Li, 2010; Rogers and Van Buskirk, 2013), though our sample shows slightly higher volatility measures, potentially due to our focus on the post-financial crisis period.

RESULTS

Regression Analysis

We find strong evidence that the introduction of Regulation Crowdfunding is associated with a significant decrease in voluntary disclosure. The treatment effect estimates indicate that firms subject to Reg CF reduce their voluntary disclosures by approximately 6.90% (specification 1) to 6.72% (specification 2) compared to control firms. This negative association is consistent with our prediction that increased litigation risk from an expanded, less sophisticated investor base leads firms to adopt more conservative disclosure policies.

The treatment effect is highly statistically significant across both specifications (t-statistics of -4.45 and -4.84, respectively; p-values < 0.001). The economic magnitude of the effect is meaningful, representing a substantial reduction in voluntary disclosure activity. The inclusion of control variables in specification 2 improves the model's explanatory power substantially, as evidenced by the increase in R-squared from 0.14% to 22.48%, while the treatment effect remains stable, suggesting the relationship is robust to potential confounding factors.

The control variables exhibit associations consistent with prior literature on voluntary disclosure determinants. Institutional ownership (*linstown*) and firm size (*lsize*) are positively associated with voluntary disclosure (coefficients of 0.4243 and 0.1219, respectively; $p < 0.001$), consistent with the monitoring role of institutional investors and economies of scale in disclosure. The negative associations between voluntary disclosure and book-to-market ratio (*lbtm*: -0.0965), stock return volatility (*levol*: -0.0839), and litigation risk (*lcalrisk*: -0.2445) align with prior findings that growth firms, firms with volatile returns, and firms with higher litigation risk tend to be more conservative in their disclosure practices. The significant negative coefficient on loss firms (*lloss*: -0.0812) suggests that poorly performing firms are less likely to provide voluntary disclosures. These results strongly support our hypothesis (H1) that Regulation Crowdfunding leads to decreased voluntary disclosure through the litigation

risk channel, as the observed reduction in voluntary disclosure is both statistically and economically significant, even after controlling for known determinants of disclosure behavior.

CONCLUSION

This study examines how Regulation Crowdfunding affects firms' voluntary disclosure decisions through the litigation risk channel. Specifically, we investigate whether the implementation of Regulation Crowdfunding in 2016, which enabled smaller companies to raise capital through crowdfunding platforms, influenced firms' disclosure behavior by altering their exposure to litigation risk. Our analysis builds on the theoretical framework developed by prior literature suggesting that litigation risk serves as a key determinant of corporate disclosure policies (Skinner, 1994; Field et al., 2005).

While our study does not present empirical findings, our theoretical analysis suggests that Regulation Crowdfunding likely creates a unique disclosure environment where traditional litigation risk considerations may operate differently. The regulation's provision of liability exemptions for certain disclosures, combined with the distinct characteristics of retail crowdfunding investors, potentially reshapes firms' cost-benefit calculations regarding voluntary disclosure. This represents a departure from conventional disclosure frameworks documented in traditional public markets (Dye, 2001; Verrecchia, 2001).

The implications of our analysis extend to multiple stakeholders in the crowdfunding ecosystem. For regulators, our study highlights the need to carefully balance investor protection with capital formation objectives. The current liability provisions under Regulation Crowdfunding may require refinement to optimize the trade-off between encouraging transparent disclosure and avoiding excessive litigation risk that could deter small firms from

utilizing crowdfunding. For managers, our analysis suggests that the modified litigation environment under Regulation Crowdfunding may warrant a recalibration of disclosure strategies, particularly regarding forward-looking information and risk factors.

For investors, our study underscores the importance of understanding the unique disclosure incentives and constraints in crowdfunding markets. The different litigation risk dynamics may result in systematic differences in the quality and quantity of voluntary disclosures compared to traditional public markets. This has implications for investment decision-making and portfolio allocation strategies in the crowdfunding context.

Our study faces several important limitations that future research could address. First, the nascent nature of Regulation Crowdfunding and limited data availability constrain our ability to conduct comprehensive empirical analyses. Future studies could leverage larger datasets as the market matures to test our theoretical predictions empirically. Second, our focus on litigation risk as the primary channel may overlook other important mechanisms through which Regulation Crowdfunding affects disclosure decisions. Future research could explore additional channels such as proprietary costs, information asymmetry, and agency conflicts in the crowdfunding context.

Promising avenues for future research include examining how the interaction between litigation risk and other institutional features of crowdfunding markets affects disclosure choices. Researchers could investigate whether the relationship between litigation risk and voluntary disclosure varies with firm characteristics, investor sophistication, or platform-specific factors. Additionally, future studies could explore how changes in the regulatory environment or judicial interpretations of liability provisions affect the litigation risk-disclosure relationship in crowdfunding markets. Such research would contribute to our understanding of how alternative financing channels and their associated regulatory frameworks influence corporate disclosure practices.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	14,066	0.6044	0.8942	0.0000	0.0000	1.6094
Treatment Effect	14,066	0.5955	0.4908	0.0000	1.0000	1.0000
Institutional ownership	14,066	0.6102	0.3315	0.3297	0.7061	0.8882
Firm size	14,066	6.6484	2.1305	5.1134	6.7042	8.1377
Book-to-market	14,066	0.5079	0.5469	0.2102	0.4099	0.6982
ROA	14,066	-0.0602	0.2757	-0.0437	0.0200	0.0620
Stock return	14,066	0.0078	0.4432	-0.2306	-0.0361	0.1636
Earnings volatility	14,066	0.1596	0.3286	0.0231	0.0538	0.1432
Loss	14,066	0.3386	0.4733	0.0000	0.0000	1.0000
Class action litigation risk	14,066	0.2661	0.2495	0.0853	0.1757	0.3616

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

Table 2
Pearson Correlations
RegulationCrowdfunding Litigation Risk

	Treatment Effect	FreqMF	Institutional ownership	Firm size	Book-to-market	ROA	Stock return	Earnings volatility	Loss	Class action litigation risk
Treatment Effect	1.00	-0.04	0.06	-0.01	-0.01	-0.08	-0.06	0.05	0.07	0.06
FreqMF	-0.04	1.00	0.38	0.44	-0.15	0.25	-0.01	-0.20	-0.26	-0.08
Institutional ownership	0.06	0.38	1.00	0.63	-0.17	0.36	-0.03	-0.28	-0.30	-0.02
Firm size	-0.01	0.44	0.63	1.00	-0.29	0.42	0.07	-0.30	-0.43	0.05
Book-to-market	-0.01	-0.15	-0.17	-0.29	1.00	0.10	-0.15	-0.10	0.02	-0.05
ROA	-0.08	0.25	0.36	0.42	0.10	1.00	0.16	-0.61	-0.61	-0.25
Stock return	-0.06	-0.01	-0.03	0.07	-0.15	0.16	1.00	-0.05	-0.13	-0.05
Earnings volatility	0.05	-0.20	-0.28	-0.30	-0.10	-0.61	-0.05	1.00	0.40	0.23
Loss	0.07	-0.26	-0.30	-0.43	0.02	-0.61	-0.13	0.40	1.00	0.27
Class action litigation risk	0.06	-0.08	-0.02	0.05	-0.05	-0.25	-0.05	0.23	0.27	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 Crowdfunding on Management Forecast Frequency**

	(1)	(2)
Treatment Effect	-0.0690*** (4.45)	-0.0672*** (4.84)
Institutional ownership		0.4243*** (15.56)
Firm size		0.1219*** (25.29)
Book-to-market		-0.0965*** (8.80)
ROA		0.0650*** (2.82)
Stock return		-0.0929*** (7.37)
Earnings volatility		-0.0839*** (5.25)
Loss		-0.0812*** (4.60)
Class action litigation risk		-0.2445*** (9.86)
N	14,066	14,066
R ²	0.0014	0.2248

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