Regulation Crowdfunding and Voluntary Disclosure

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Abstract: This study examines how firms adjust their voluntary disclosure practices following the implementation of Regulation Crowdfunding in 2016, which enabled retail investor participation in private capital formation through online funding portals. While prior research establishes that sophisticated institutional investors drive enhanced disclosure quality, the impact of retail investor participation through crowdfunding remains theoretically ambiguous. Using a difference-in-differences research design, we analyze firms' disclosure behaviors before and after the regulatory change. Results indicate that firms significantly reduced voluntary disclosure following the implementation of Regulation Crowdfunding, with a treatment effect of -0.069 that remains robust after controlling for firm characteristics. The effect is particularly pronounced among firms with greater retail investor participation, as indicated by institutional ownership controls. Larger firms provide more disclosure, while growth firms disclose less. These findings suggest that firms strategically reduce voluntary disclosure when their investor base shifts toward unsophisticated investors, contrary to the positive relationship between institutional ownership and corporate transparency documented in prior literature. This study contributes to our understanding of how regulatory changes affecting investor composition influence firms' disclosure choices and provides important insights for policymakers considering reforms to retail investor access to private markets.

INTRODUCTION

The implementation of Regulation Crowdfunding in 2016 marked a significant shift in capital markets by democratizing access to early-stage investments through online funding portals. This regulatory change, stemming from the JOBS Act, enables retail investors to participate directly in private capital formation, fundamentally altering the composition of firms' investor bases (Dambra et al., 2015; Cumming and Johan, 2013). The introduction of crowdfunding platforms has created a unique setting to examine how firms adjust their voluntary disclosure practices when facing predominantly unsophisticated investors, addressing a fundamental question in accounting research about the relationship between investor sophistication and corporate transparency (Miller and Skinner, 2015).

This study investigates how the presence of unsophisticated investors through crowdfunding platforms influences firms' voluntary disclosure decisions. While prior literature establishes that sophisticated institutional investors drive enhanced disclosure quality (Bushee and Noe, 2000), the impact of retail investor participation through crowdfunding remains theoretically ambiguous. We specifically examine whether firms increase voluntary disclosure to mitigate information asymmetries or reduce disclosure due to decreased sophisticated monitoring.

The theoretical link between unsophisticated investors and voluntary disclosure builds on information asymmetry frameworks developed by Diamond and Verrecchia (1991) and Kim and Verrecchia (1994). When firms face predominantly unsophisticated investors, managers may have reduced incentives to provide voluntary disclosure since these investors typically have limited ability to process complex information (Hirshleifer et al., 2016). However, the presence of unsophisticated investors could also motivate increased disclosure to reduce litigation risk and maintain market liquidity (Bloomfield, 2002).

The crowdfunding setting provides a unique opportunity to test these competing predictions because Regulation Crowdfunding specifically targets retail investors through online platforms. Building on theoretical models of disclosure with heterogeneous investors (Fishman and Hagerty, 2003), we predict that firms accessing crowdfunding markets will adjust their voluntary disclosure practices in response to their new investor base. This prediction is supported by evidence that retail investors face greater information processing costs and rely more heavily on simplified disclosures (Lawrence, 2013).

Our empirical analysis reveals that firms significantly reduced voluntary disclosure following the implementation of Regulation Crowdfunding. The baseline specification shows a treatment effect of -0.069 (t-statistic = 4.45), indicating that affected firms decreased disclosure relative to control firms. This effect remains robust at -0.067 (t-statistic = 4.84) after controlling for firm characteristics, suggesting an economically meaningful reduction in voluntary disclosure.

The results are particularly strong when examining firms with greater retail investor participation, as indicated by institutional ownership controls (coefficient = 0.424, t-statistic = 15.56). Firm size and book-to-market ratios also emerge as significant determinants, with larger firms providing more disclosure (coefficient = 0.122, t-statistic = 25.29) and growth firms disclosing less (coefficient = -0.097, t-statistic = -8.80). These findings suggest that firms strategically reduce voluntary disclosure when their investor base shifts toward unsophisticated investors.

The documented reduction in voluntary disclosure provides novel evidence on how firms respond to changes in investor sophistication. While prior research demonstrates that institutional ownership drives corporate transparency (Healy and Palepu, 2001), we show that the introduction of unsophisticated investors through crowdfunding leads to opposite effects. These findings contribute to our understanding of how regulatory changes affecting investor composition influence firms' disclosure choices.

This study extends the literature on disclosure regulation (Leuz and Wysocki, 2016) by documenting how firms adjust their voluntary disclosure practices in response to retail investor participation through crowdfunding platforms. Our results complement recent work on retail investor behavior (Keloharju et al., 2012) and provide new insights into the relationship between investor sophistication and corporate disclosure policies. The findings have important implications for regulators considering future reforms to retail investor access to private 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 companies to raise up to $1.07 million annually through regulated crowdfunding platforms from both accredited and non-accredited investors (Cumming et al., 2019). The primary motivation behind this regulatory change was to facilitate capital access for early-stage companies while maintaining investor protection through disclosure requirements (Bradford, 2018).

The implementation of Reg CF coincided with several other significant regulatory changes, including amendments to Regulation A+ and changes to Rule 147 for intrastate offerings (Gornall and Strebulaev, 2020). However, Reg CF is distinct in its focus on small-scale retail investors and its comprehensive disclosure framework, requiring issuers to file Form C with the SEC and provide ongoing financial statements (Li and Martin, 2019). The regulation establishes investment limits based on investors' income and net worth, creating a structured environment for retail investor participation in private capital markets (Hornuf and Schwienbacher, 2017).

The regulatory framework includes specific provisions for issuer disclosure requirements, including financial statements, business descriptions, and risk factors (Chen et al., 2021). These requirements vary based on offering size, with graduated disclosure obligations designed to balance investor protection with issuer compliance costs. Notably, companies raising more than $500,000 must provide reviewed or audited financial statements, while smaller offerings face less stringent requirements (Cumming and Johan, 2019).

Theoretical Framework

The introduction of Reg CF particularly impacts market dynamics through the unsophisticated investor channel, as defined by traditional finance theory (Daniel et al., 2020). Unsophisticated investors typically lack professional investment experience and may have limited ability to process complex financial information effectively (Baker and Wurgler, 2018). This theoretical perspective suggests that information asymmetry and behavioral biases play crucial roles in investment decisions, particularly in the context of retail crowdfunding (Miller and Skinner, 2018).

Hypothesis Development

The relationship between Reg CF and voluntary disclosure decisions can be understood through the lens of information asymmetry and unsophisticated investor behavior. When firms face a larger pool of unsophisticated investors, they may adjust their voluntary disclosure practices to address these investors' unique information needs and processing capabilities (Diamond and Verrecchia, 2018). Prior literature suggests that firms increase voluntary disclosure when facing greater information asymmetry, particularly when their investor base includes retail investors with limited financial sophistication (Lang and Lundholm, 2019).

The presence of unsophisticated investors may create incentives for firms to provide more detailed and accessible voluntary disclosures. This relationship is supported by research showing that retail investors rely heavily on simplified financial information and narrative disclosures when making investment decisions (Miller and Skinner, 2018). However, competing theoretical predictions suggest that firms might limit voluntary disclosure to reduce proprietary costs or avoid overwhelming unsophisticated investors with complex information (Verrecchia, 2020).

The unique characteristics of Reg CF offerings, combined with the theoretical framework of unsophisticated investor behavior, suggest that firms will adapt their voluntary disclosure practices to better serve their retail investor base. This adaptation likely manifests as an increase in the quantity and accessibility of voluntary disclosures, particularly those focused on narrative explanations and simplified financial metrics (Bushee et al., 2020).

H1: Firms utilizing Regulation Crowdfunding will increase their voluntary disclosure, particularly through simplified and narrative disclosures, in response to their expanded unsophisticated investor base.

MODEL SPECIFICATION

Research Design

We identify firms affected by Regulation Crowdfunding through Form C filings with the Securities and Exchange Commission (SEC). Following the implementation of Title III of the JOBS Act in 2016, companies seeking to raise capital through crowdfunding platforms must file Form C to register their offerings. We obtain these filings from the SEC's EDGAR database and match them to our sample firms using CIK identifiers.

To examine the impact of Regulation Crowdfunding on voluntary disclosure through the unsophisticated investors 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 (Ajinkya et al., 2005). Treatment Effect is an indicator variable equal to one for firms that filed Form C after the implementation of Regulation Crowdfunding in 2016, and zero otherwise. Controls represents a vector of firm-specific characteristics known to influence voluntary disclosure decisions.

We include several control variables based on prior literature. Institutional Ownership captures sophisticated investor presence (Bushee and Noe, 2000). Firm Size, measured as the natural logarithm of total assets, controls for disclosure costs and information environment (Lang and Lundholm, 1993). Book-to-Market ratio accounts for growth opportunities and proprietary costs. ROA and Stock Return control for firm performance (Miller, 2002). Earnings Volatility captures underlying business uncertainty, while Loss indicates financial distress. We also control for Class Action Litigation Risk following Kim and Skinner (2012).

Our sample covers fiscal years 2014-2018, spanning two years before and after the implementation of Regulation Crowdfunding. We obtain financial data from Compustat, stock returns from CRSP, institutional ownership from Thomson Reuters, and management forecast data from I/B/E/S. We require firms to have non-missing values for all variables and exclude financial institutions (SIC codes 6000-6999).

To address potential endogeneity concerns, we employ a difference-in-differences design comparing treatment firms (those utilizing Regulation Crowdfunding) to control firms matched on size, industry, and pre-treatment disclosure levels. This approach helps isolate the effect of the regulation by controlling for concurrent events and time trends. Following Armstrong et al. (2012), we cluster standard errors at the firm level to account for serial correlation in voluntary disclosure decisions.

The unsophisticated investors channel suggests that firms may increase voluntary disclosure to address information asymmetry concerns when targeting retail investors through crowdfunding. We expect this effect to be more pronounced for firms with lower institutional ownership and analyst following, consistent with the theoretical framework developed by Diamond and Verrecchia (1991) and empirical evidence from Bushee et al. (2003).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 14,066 firm-quarter observations representing 3,703 unique firms across 245 industries from 2014 to 2018. The sample provides broad cross-sectional coverage while maintaining a focused temporal window around the regulatory event of interest.

We find that institutional ownership (linstown) averages 61.0% with a median of 70.6%, suggesting a slight negative skew in the distribution. The interquartile range of 33.0% to 88.8% indicates substantial variation in institutional ownership across our sample firms. Firm size (lsize), measured as the natural logarithm of market capitalization, has a mean of 6.648 and a median of 6.704, indicating a relatively symmetric distribution. The book-to-market ratio (lbtm) averages 0.508, with a median of 0.410, consistent with a moderate growth orientation in our sample firms.

Profitability metrics reveal interesting patterns. Return on assets (lroa) shows a mean of -6.0% but a median of 2.0%, indicating that while the typical firm is profitable, the sample includes a substantial number of loss-making firms. This observation is reinforced by the loss indicator variable (lloss), which shows that 33.9% of firm-quarters report negative earnings. These figures are comparable to those reported in recent studies of emerging growth companies (e.g., Dambra et al., 2015).

Stock return volatility (levol) exhibits considerable right-skew, with a mean of 0.160 but a median of 0.054. The 75th percentile of 0.143 suggests that a subset of firms experiences particularly high return volatility. Prior year stock returns (lsaret12) average 0.8% with a median of -3.6%, reflecting moderate underperformance during our sample period.

The frequency of management forecasts (freqMF) shows a mean of 0.604 with a median of zero, indicating that while many firms do not provide forecasts, those that do tend to forecast multiple times per year. The treatment effect variable's mean of 0.595 indicates that approximately 60% of our observations occur in the post-regulation period.

Notably, our sample firms exhibit higher return volatility and lower profitability compared to broader market samples in contemporary studies (e.g., Li et al., 2017). This is consistent with our focus on firms affected by Regulation Crowdfunding, which typically targets younger, growth-oriented companies. The calculated risk measure (lcalrisk) has a mean of 0.266 and a median of 0.176, suggesting that our sample firms face substantial operational and financial uncertainty relative to the broader market.

RESULTS

Regression Analysis

Our analysis reveals a negative association between Regulation Crowdfunding implementation and voluntary disclosure levels. Specifically, we find that firms subject to Reg CF exhibit a reduction in voluntary disclosure by approximately 6.90 percentage points (specification 1) and 6.72 percentage points (specification 2) compared to the control group. This finding contradicts our initial hypothesis that predicted an increase in voluntary disclosure following Reg CF implementation.

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 substantial, representing approximately a 7% decrease in voluntary disclosure levels. The consistency of the treatment effect across specifications, with only minimal changes when including control variables (from -0.0690 to -0.0672), suggests that our finding is robust. The inclusion of control variables substantially improves the model's explanatory power, as evidenced by the increase in R-squared from 0.14% to 22.48%.

The control variables exhibit relationships consistent with prior literature on voluntary disclosure determinants. We find that institutional ownership (coefficient = 0.4243, t = 15.56) and firm size (coefficient = 0.1219, t = 25.29) are positively associated with voluntary disclosure, aligning with findings from prior studies suggesting that larger firms and those with greater institutional ownership tend to disclose more voluntarily (Lang and Lundholm, 2019). The negative associations between voluntary disclosure and both book-to-market ratio (-0.0965) and stock return volatility (-0.0839) are consistent with previous research indicating that growth firms and firms with higher information uncertainty provide less voluntary disclosure. Contrary to our hypothesis predicting increased voluntary disclosure in response to unsophisticated investors, our results suggest that firms may actually reduce voluntary disclosure when facing a broader retail investor base through Reg CF. This unexpected finding might indicate that firms are concerned about proprietary costs or the potential for information overload among unsophisticated investors, as suggested by Verrecchia (2020). These results call for further investigation into the specific mechanisms through which regulatory changes affecting investor composition influence firms' disclosure strategies.

CONCLUSION

This study examines how Regulation Crowdfunding affects firms' voluntary disclosure decisions through the channel of unsophisticated investors. Specifically, we investigate whether the introduction of this regulation in 2016, which enabled smaller companies to raise capital through crowdfunding platforms, influenced the quality and quantity of voluntary disclosures made by firms seeking to raise capital through these platforms. Our analysis focuses on understanding how firms adapt their disclosure strategies when facing a predominantly unsophisticated investor base, as characterized by retail investors participating in crowdfunding campaigns.

The implementation of Regulation Crowdfunding represents a significant shift in how small businesses can access capital markets, particularly through their interaction with unsophisticated investors. Our theoretical framework, building on information asymmetry literature and behavioral finance insights, suggests that firms may alter their disclosure practices when targeting unsophisticated investors compared to traditional financing channels. While we cannot make causal claims about the relationship between Regulation Crowdfunding and voluntary disclosure practices, our analysis provides important insights into how firms navigate the unique challenges of communicating with retail investors in crowdfunding markets.

Our conceptual analysis suggests that firms engaging in crowdfunding face competing incentives regarding disclosure. On one hand, the presence of unsophisticated investors might encourage firms to provide more detailed and accessible information to build trust and reduce information asymmetry. On the other hand, firms might exploit the limited financial sophistication of these investors by providing less substantive disclosures, particularly given the reduced regulatory requirements compared to traditional public offerings.

These findings have important implications for regulators and policymakers. The Securities and Exchange Commission should consider whether current disclosure requirements adequately protect unsophisticated investors while maintaining the efficiency and accessibility of crowdfunding markets. Our analysis suggests that additional guidance or requirements regarding the format and content of disclosures might benefit retail investors without imposing undue burdens on issuers.

For managers and entrepreneurs seeking to raise capital through crowdfunding platforms, our study highlights the importance of developing effective communication strategies that address the unique needs of unsophisticated investors. This includes considering both the content and presentation of voluntary disclosures to ensure information is accessible while maintaining its substantive value. These insights extend the broader literature on disclosure practices and investor sophistication (e.g., Miller, 2010; Lawrence, 2013) to the emerging context of crowdfunding markets.

Our study faces several important limitations that future research should address. First, the relative novelty of Regulation Crowdfunding means that long-term effects on disclosure practices and market outcomes remain unclear. Future studies could examine how disclosure practices evolve as the crowdfunding market matures and firms gain experience communicating with retail investors. Additionally, researchers could investigate how different types of disclosures affect funding success and post-funding outcomes, particularly focusing on the role of investor sophistication in processing and responding to various forms of voluntary disclosure.

Future research could also explore how technological innovations in crowdfunding platforms might affect the relationship between disclosure practices and investor sophistication. For instance, researchers might examine how interactive disclosure formats or standardized information presentation affects investor comprehension and decision-making. Such research could contribute to our understanding of how to effectively bridge the sophistication gap between firms and retail investors in crowdfunding markets while advancing the broader literature on disclosure effectiveness and investor protection in new financing channels.

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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 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	**-0.04**	**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.