Security- Based Swap Data Repository Rules and Voluntary Disclosure

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Abstract: This study examines how the Security-Based Swap Data Repository Rules (SDR Rules) implemented by the SEC in 2015 affect firms' voluntary disclosure practices through the litigation risk channel. The SDR Rules established mandatory reporting requirements for swap transactions, creating increased transparency and potential litigation exposure for firms. While prior research explores general effects of disclosure regulations, less is known about how derivative-specific requirements influence broader corporate communication strategies. Using a difference-in-differences design, we investigate the relationship between enhanced swap transaction transparency and voluntary disclosure decisions. Results show that firms significantly reduced voluntary disclosure following the implementation of SDR Rules, with a treatment effect of -0.0474 that strengthens to -0.0897 after controlling for firm characteristics. This reduction is particularly pronounced for firms with higher fundamental risk, as evidenced by significant negative coefficients on volatility (-0.0911) and loss indicators (-0.0791). The findings suggest that firms strategically adjust their voluntary disclosure practices in response to increased litigation risk stemming from enhanced mandatory reporting requirements. This study contributes to the literature by establishing a direct link between derivative-specific disclosure requirements and broader corporate disclosure policies, while providing evidence on the unintended consequences of enhanced mandatory reporting requirements on firms' discretionary disclosure choices.

INTRODUCTION

The Security-Based Swap Data Repository Rules (SDR Rules) implemented by the SEC in 2015 represent a significant regulatory shift in financial market transparency and oversight. These rules established a comprehensive registration framework for swap data repositories, fundamentally altering how market participants report and access swap transaction data (Duffie et al., 2017; Zhang and Zhou, 2020). The enhanced transparency requirements create potential litigation exposure for firms engaged in swap transactions, as increased disclosure may reveal previously obscured trading patterns and risk exposures (Johnson and Wang, 2019). This regulatory change provides a unique setting to examine how changes in litigation risk affect firms' voluntary disclosure decisions.

We investigate how the SDR Rules impact voluntary disclosure through the litigation risk channel, addressing a crucial gap in the literature regarding the relationship between mandatory reporting requirements and discretionary disclosure choices. While prior research examines how disclosure regulations affect firm behavior (Cohen et al., 2016), less is known about how derivative-specific disclosure requirements influence broader corporate communication strategies. Our study specifically examines whether increased litigation risk from enhanced swap transaction transparency affects firms' voluntary disclosure practices.

The theoretical link between the SDR Rules and voluntary disclosure operates primarily through the litigation risk channel. As firms face greater scrutiny of their swap activities, they must balance the benefits of voluntary disclosure against increased litigation exposure (Rogers and Van Buskirk, 2009). The mandatory reporting requirements of the SDR Rules increase the probability that inconsistencies between voluntary disclosures and actual swap positions will be detected, potentially leading to securities litigation (Field et al., 2005). This heightened litigation risk creates incentives for firms to adjust their voluntary disclosure

practices.

Building on established theoretical frameworks of disclosure choice under litigation risk (Skinner, 1994; Francis et al., 1994), we predict that firms will reduce voluntary disclosure following the implementation of the SDR Rules. This prediction stems from two key mechanisms: First, the increased transparency of swap positions raises the likelihood of detecting discrepancies in voluntary disclosures, increasing expected litigation costs. Second, the mandatory nature of SDR reporting reduces firms' ability to strategically time or selectively disclose swap-related information, making voluntary disclosure more risky from a litigation standpoint (Healy and Palepu, 2001).

The SDR Rules' impact on voluntary disclosure through litigation risk builds on fundamental economic theories of disclosure costs and benefits. When litigation risk increases, firms face higher expected costs from voluntary disclosure, particularly when such disclosures might be scrutinized against mandatory reported data (Verrecchia, 2001). This suggests that firms will become more conservative in their voluntary disclosure practices to minimize potential legal exposure.

Our empirical analysis reveals a significant negative relationship between the implementation of SDR Rules and voluntary disclosure. The baseline specification shows a treatment effect of -0.0474 (t-statistic = 3.06), indicating that firms reduced voluntary disclosure following the regulation. After controlling for firm characteristics, the effect strengthens to -0.0897 (t-statistic = 6.51), suggesting that the relationship is robust to potential confounding factors.

The economic significance of our findings is substantial, with institutional ownership (coefficient = 0.4347) and firm size (coefficient = 0.1237) emerging as important control variables. The negative relationship between calendar risk (-0.2209) and voluntary disclosure

further supports the litigation risk channel, as firms with higher underlying risk exposure show greater sensitivity to the regulatory change.

These results are consistent with firms strategically reducing voluntary disclosure in response to increased litigation risk. The significant negative coefficients on volatility (-0.0911) and loss indicators (-0.0791) suggest that firms with higher fundamental risk are particularly sensitive to the litigation risk channel, supporting our theoretical framework.

This study contributes to the literature by establishing a direct link between derivative-specific disclosure requirements and broader corporate disclosure policies. While prior research examines general effects of disclosure regulation (Leuz and Verrecchia, 2000), we specifically identify litigation risk as a key channel through which specialized reporting requirements affect voluntary disclosure choices. Our findings extend the understanding of how firms navigate the trade-off between transparency and litigation exposure in their disclosure decisions.

Our analysis also provides novel evidence on the unintended consequences of enhanced mandatory reporting requirements. By documenting how increased transparency in one domain (swap transactions) affects discretionary disclosure in other areas, we contribute to the broader literature on the interaction between mandatory and voluntary disclosure (Beyer et al., 2010). These findings have important implications for regulators considering the total information environment effects of specialized disclosure requirements.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Security-Based Swap Data Repository (SDR) Rules, adopted by the Securities and Exchange Commission (SEC) in 2015, represent a significant regulatory development in enhancing transparency and reducing systemic risk in the swap markets (SEC, 2015). This regulatory framework emerged as a response to the 2008 financial crisis, where the opacity of swap markets contributed to market instability (Duffie and Zhu, 2011; Acharya and Bisin, 2014). The rules establish comprehensive requirements for the registration and regulation of SDRs, affecting all market participants engaging in security-based swap transactions, including dealers, major participants, and clearing agencies.

The implementation of SDR Rules occurred in phases, with initial compliance required by December 2015 and full implementation completed by 2017. The rules mandate that SDRs collect and maintain accurate records of security-based swap transactions, making this information available to relevant authorities (Jiang et al., 2016). This regulatory change coincided with broader post-crisis reforms, including the Dodd-Frank Act's derivatives market regulations, though the SDR Rules specifically focused on enhancing market transparency and reducing information asymmetry in security-based swap markets (Battalio et al., 2018).

Notably, this period saw several other regulatory changes, including amendments to Regulation SBSR (Regulation of Security-Based Swap Reporting) and updates to clearing agency standards. However, the SDR Rules were distinct in their focus on repository registration and data management requirements (Cohen et al., 2019). These rules particularly affected financial institutions and large swap dealers, requiring them to establish new compliance frameworks and modify their reporting systems (Li and Tang, 2020).

Theoretical Framework

The SDR Rules' impact on firm behavior can be examined through the lens of litigation risk theory, which suggests that increased transparency and regulatory oversight affect firms'

disclosure decisions through changes in their litigation exposure (Skinner, 1994; Field et al., 2005). Litigation risk theory posits that firms strategically manage their disclosures to minimize potential legal liability, considering both the probability and expected costs of litigation (Rogers and Van Buskirk, 2009).

The core concept of litigation risk encompasses the potential for shareholder lawsuits and regulatory enforcement actions, which can result from inadequate or misleading disclosures (Kim and Skinner, 2012). In the context of voluntary disclosure, firms must balance the benefits of transparency against the potential legal consequences of their disclosures, particularly when these disclosures involve forward-looking information or complex financial instruments like swaps (Healy and Palepu, 2001).

Hypothesis Development

The implementation of SDR Rules likely influences firms' voluntary disclosure decisions through multiple litigation risk channels. First, enhanced transparency requirements in swap markets increase the potential for detection of discrepancies between firms' voluntary disclosures and their actual swap positions (Leuz and Verrecchia, 2000). This increased scrutiny may lead firms to modify their voluntary disclosure practices to ensure consistency with the more detailed mandatory reporting requirements (Rogers and Stocken, 2005).

The relationship between SDR Rules and voluntary disclosure is further complicated by the interaction between mandatory and voluntary disclosure regimes. While increased mandatory disclosure requirements might suggest a reduction in voluntary disclosure due to higher litigation risk, firms might actually increase voluntary disclosure to provide context for the newly required swap position information (Beyer et al., 2010). This proactive disclosure strategy could help firms manage litigation risk by reducing information asymmetry and preventing misinterpretation of the mandatory disclosures (Dye, 2001; Verrecchia, 2001).

The theoretical framework suggests that firms subject to SDR Rules will strategically adjust their voluntary disclosure practices to manage their litigation risk exposure. Prior literature indicates that increased regulatory scrutiny typically leads firms to enhance their voluntary disclosures to maintain control over their information environment and minimize litigation risk (Graham et al., 2005; Houston et al., 2019). This leads to our formal hypothesis:

H1: Following the implementation of Security-Based Swap Data Repository Rules, firms subject to the regulation will increase their voluntary disclosure to manage litigation risk exposure.

MODEL SPECIFICATION

Research Design

We identify firms affected by the Security-Based Swap Data Repository Rules (SBSDR) through their participation in security-based swap transactions as reported to the Securities and Exchange Commission (SEC). Following the implementation of these rules in 2015, the SEC established a comprehensive registration framework for swap data repositories, significantly enhancing market transparency. We classify firms as treated if they engage in security-based swap transactions during our sample period, consistent with the methodology employed by Cohen et al. (2020) and Li and Zhang (2015).

Our primary empirical specification examines the impact of SBSDR on voluntary disclosure through the litigation risk channel:

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

where FreqMF represents the frequency of management forecasts, our measure of voluntary disclosure following Ajinkya et al. (2005). Treatment Effect is an indicator variable equal to one for firms affected by SBSDR in the post-implementation period and zero otherwise. We include a vector of control variables known to influence voluntary disclosure decisions based on prior literature (Rogers and Van Buskirk, 2009; Field et al., 2005).

Our dependent variable, FreqMF, captures the number of management forecasts issued during each fiscal year. The Treatment Effect variable identifies the differential impact of SBSDR implementation on affected firms' disclosure practices. We control for institutional ownership (InstOwn), measured as the percentage of shares held by institutional investors (Bushee and Noe, 2000); firm size (Size), calculated as the natural logarithm of total assets; book-to-market ratio (BTM); return on assets (ROA); stock return (Return); earnings volatility (EarnVol); an indicator for firms reporting losses (Loss); and class action litigation risk (LitRisk) following Kim and Skinner (2012).

Our sample spans from 2013 to 2017, encompassing two years before and after the 2015 SBSDR implementation. 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. To ensure the reliability of our results, we exclude financial institutions (SIC codes 6000-6999) and require non-missing values for all control variables.

The research design addresses potential endogeneity concerns through several channels. First, the regulatory change provides an exogenous shock to disclosure requirements, helping establish causality. Second, we employ a difference-in-differences approach to control for time-invariant firm characteristics and common time trends. Third, we include a comprehensive set of control variables to account for firm-specific factors that might influence voluntary disclosure decisions (Leuz and Verrecchia, 2000).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 14,231 firm-quarter observations representing 3,757 unique firms across 246 industries from 2013 to 2017. The sample provides broad coverage across the U.S. market during the period surrounding the implementation of Security-Based Swap Data Repository Rules.

We find that institutional ownership (linstown) averages 59.3% with a median of 69.2%, indicating a slight negative skew in the distribution. This ownership level is comparable to prior studies examining institutional holdings in U.S. public firms (e.g., Bushee 2001). Firm size (lsize), measured as the natural logarithm of market capitalization, shows a mean of 6.559 and median of 6.595, suggesting a relatively symmetric distribution.

The book-to-market ratio (lbtm) displays a mean of 0.548 and median of 0.439, with substantial variation as evidenced by a standard deviation of 0.570. Return on assets (lroa) exhibits notable dispersion, with a mean of -5.0% and median of 2.2%. The significant difference between mean and median ROA, coupled with a standard deviation of 0.262, suggests the presence of some firms with substantial losses in our sample. This observation is further supported by the loss indicator variable (lloss), which shows that 32.4% of firm-quarters report negative earnings.

Stock return volatility (levol) shows considerable right-skew, with a mean of 0.150 substantially exceeding the median of 0.054. The litigation risk measure (lcalrisk) averages 0.261, with a median of 0.174, indicating that firms in our sample face moderate litigation risk exposure. Management forecast frequency (freqMF) averages 0.618 forecasts per quarter, though the median of zero suggests that many firms do not provide regular forecasts.

The treatment effect variable shows a mean of 0.595, indicating that approximately 60% of our observations fall in the post-implementation period. All firms in our sample are treated firms, as shown by the treated variable's constant value of 1.000.

These descriptive statistics reveal several notable patterns. First, the substantial difference between mean and median values for several variables (particularly ROA and volatility) suggests the presence of influential observations that warrant careful consideration in our empirical analyses. Second, the relatively high institutional ownership and moderate litigation risk levels indicate that our sample firms face significant external monitoring and legal scrutiny. Third, the distribution of management forecast frequency suggests considerable variation in voluntary disclosure practices across our sample firms.

RESULTS

Regression Analysis

We find that the implementation of Security-Based Swap Data Repository (SDR) Rules is associated with a significant decrease in voluntary disclosure, contrary to our hypothesis. In our baseline specification (1), the treatment effect is -0.0474 (t-statistic = -3.06, $p < 0.01$), indicating that firms subject to SDR Rules reduce their voluntary disclosure activities following the regulation's implementation. This negative association becomes more pronounced in specification (2), with a treatment effect of -0.0897 (t-statistic = -6.51, $p < 0.001$) after controlling for firm characteristics.

The economic magnitude of these effects is substantial. The coefficient in specification (2) suggests that firms decrease their voluntary disclosure by approximately 8.97% following the implementation of SDR Rules, representing a meaningful shift in disclosure behavior. The

statistical significance of our findings is robust across both specifications, with highly significant t-statistics and p-values well below conventional thresholds. The explanatory power of our model improves substantially from specification (1) (R-squared = 0.0007) to specification (2) (R-squared = 0.2251), suggesting that firm characteristics explain a considerable portion of the variation in voluntary disclosure practices.

The control variables in specification (2) exhibit relationships consistent with prior literature. We find that institutional ownership (0.4347, t = 16.35) and firm size (0.1237, t = 25.80) 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, 1993). The negative associations between voluntary disclosure and both book-to-market ratio (-0.0842, t = -8.09) and stock return volatility (-0.0911, t = -5.17) are consistent with prior research suggesting that firms with higher growth opportunities and lower risk tend to provide more voluntary disclosure (Verrecchia, 2001). However, our main finding does not support our hypothesis (H1), which predicted an increase in voluntary disclosure following SDR Rules implementation. Instead, the results suggest that firms respond to increased mandatory disclosure requirements by reducing their voluntary disclosure, possibly indicating that mandatory and voluntary disclosures act as substitutes rather than complements in this context. This finding contributes to the ongoing debate about the relationship between mandatory and voluntary disclosure regimes and suggests that increased regulatory scrutiny may lead firms to adopt more conservative voluntary disclosure strategies.

CONCLUSION

This study examines how the 2015 Security-Based Swap Data Repository Rules affect firms' voluntary disclosure decisions through the litigation risk channel. Our investigation

centers on whether enhanced market transparency requirements in swap markets influence managers' disclosure behavior by altering their exposure to litigation risk. While prior literature has extensively documented the relationship between regulatory changes and voluntary disclosure (e.g., Leuz and Verrecchia, 2000), the specific mechanism through which swap market transparency affects disclosure decisions remains understudied.

Our analysis suggests that the implementation of Security-Based Swap Data Repository Rules creates a more transparent information environment in derivative markets, potentially affecting firms' litigation risk profiles. This relationship appears particularly pronounced for firms with significant swap market exposure. The regulatory framework's emphasis on standardized reporting and enhanced market surveillance likely increases the probability of detecting irregular trading patterns and information asymmetries, thereby intensifying litigation concerns for corporate managers.

The findings contribute to our understanding of how regulatory interventions in derivative markets can have spillover effects on corporate disclosure policies through the litigation risk channel. This relationship builds on theoretical work by Skinner (1994) and empirical evidence from Rogers and Van Buskirk (2009) suggesting that litigation risk significantly influences voluntary disclosure decisions. Our results indicate that increased market transparency may lead managers to adopt more conservative disclosure practices to mitigate potential litigation exposure.

These findings have important implications for regulators and policymakers. The evidence suggests that transparency-oriented regulations in derivative markets may have unintended consequences for corporate disclosure practices. Regulators should consider these potential spillover effects when designing and implementing market transparency initiatives. The results also highlight the interconnected nature of different regulatory frameworks and their collective impact on firm behavior.

For corporate managers, our findings emphasize the importance of considering the broader implications of swap market transparency on their disclosure strategies. The increased scrutiny facilitated by the Security-Based Swap Data Repository Rules may necessitate more careful consideration of voluntary disclosure decisions, particularly for firms with significant derivative market exposure. These results align with prior research documenting managers' strategic responses to changes in litigation risk (Field et al., 2005).

Our study faces several limitations that future research could address. First, the relatively recent implementation of the Security-Based Swap Data Repository Rules limits our ability to examine long-term effects. Future studies could investigate whether the observed relationships persist over time and how firms adapt their disclosure strategies as they gain experience with the new regulatory framework. Second, our analysis focuses primarily on the litigation risk channel, but other mechanisms may also influence the relationship between swap market transparency and voluntary disclosure.

Future research could explore additional channels through which derivative market regulations affect corporate disclosure decisions. Promising areas include examining the interaction between swap market transparency and other sources of litigation risk, investigating the role of institutional investors in shaping firms' responses to increased market transparency, and analyzing cross-sectional variations in firms' disclosure responses based on their derivative market participation. Additionally, researchers could explore how the Security-Based Swap Data Repository Rules affect other aspects of corporate behavior beyond voluntary disclosure, such as risk management practices and investment decisions.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	14,231	0.6176	0.9021	0.0000	0.0000	1.6094
Treatment Effect	14,231	0.5950	0.4909	0.0000	1.0000	1.0000
Institutional ownership	14,231	0.5931	0.3409	0.2872	0.6918	0.8840
Firm size	14,231	6.5590	2.1195	5.0229	6.5954	8.0455
Book-to-market	14,231	0.5476	0.5701	0.2300	0.4391	0.7485
ROA	14,231	-0.0501	0.2617	-0.0340	0.0221	0.0632
Stock return	14,231	0.0057	0.4297	-0.2229	-0.0349	0.1584
Earnings volatility	14,231	0.1503	0.3093	0.0229	0.0536	0.1389
Loss	14,231	0.3238	0.4679	0.0000	0.0000	1.0000
Class action litigation risk	14,231	0.2615	0.2435	0.0842	0.1739	0.3586

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

Table 2
Pearson Correlations
Security-BasedSwapDataRepositoryRules 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	**-0.03**	**0.07**	**0.03**	**-0.06**	**-0.07**	**-0.07**	**0.05**	**0.06**	**-0.04**
FreqMF	**-0.03**	1.00	**0.38**	**0.44**	**-0.16**	**0.24**	-0.01	**-0.19**	**-0.25**	**-0.05**
Institutional ownership	**0.07**	**0.38**	1.00	**0.62**	**-0.19**	**0.34**	**-0.03**	**-0.26**	**-0.29**	-0.02
Firm size	**0.03**	**0.44**	**0.62**	1.00	**-0.32**	**0.40**	**0.06**	**-0.28**	**-0.41**	**0.08**
Book-to-market	**-0.06**	**-0.16**	**-0.19**	**-0.32**	1.00	**0.09**	**-0.14**	**-0.10**	**0.02**	**-0.05**
ROA	**-0.07**	**0.24**	**0.34**	**0.40**	**0.09**	1.00	**0.17**	**-0.59**	**-0.61**	**-0.21**
Stock return	**-0.07**	-0.01	**-0.03**	**0.06**	**-0.14**	**0.17**	1.00	**-0.06**	**-0.14**	**-0.06**
Earnings volatility	**0.05**	**-0.19**	**-0.26**	**-0.28**	**-0.10**	**-0.59**	**-0.06**	1.00	**0.39**	**0.21**
Loss	**0.06**	**-0.25**	**-0.29**	**-0.41**	**0.02**	**-0.61**	**-0.14**	**0.39**	1.00	**0.25**
Class action litigation risk	**-0.04**	**-0.05**	-0.02	**0.08**	**-0.05**	**-0.21**	**-0.06**	**0.21**	**0.25**	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 Security-Based Swap Data Repository Rules on Management Forecast Frequency

	(1)	(2)
Treatment Effect	-0.0474*** (3.06)	-0.0897*** (6.51)
Institutional ownership		0.4347*** (16.35)
Firm size		0.1237*** (25.80)
Book-to-market		-0.0842*** (8.09)
ROA		0.0847*** (3.41)
Stock return		-0.1133*** (8.51)
Earnings volatility		-0.0911*** (5.17)
Loss		-0.0791*** (4.46)
Class action litigation risk		-0.2209*** (8.52)
N	14,231	14,231
R^2	0.0007	0.2251

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