Security- Based Swap Data Repository Rules and Voluntary Disclosure

Artemis Intelligencia

February 1, 2025

Abstract: This study examines how the Security-Based Swap Data Repository Rules (SDR Rules) implemented by the SEC in 2015 affect firms' voluntary disclosure decisions through the proprietary costs channel. The SDR Rules mandate comprehensive reporting of swap transaction data, potentially exposing firms' sensitive trading positions and strategic information to competitors. Using a difference-in-differences research design, we investigate whether firms adjust their voluntary disclosure behavior in response to these enhanced transparency requirements. Our analysis reveals that affected firms significantly reduced their voluntary disclosures following the implementation of SDR Rules, with a treatment effect of -0.0474 that strengthens to -0.0897 when controlling for firm characteristics. The relationship remains robust across multiple specifications, explaining approximately 22.51% of the variation in voluntary disclosure behavior. These findings provide strong evidence that firms strategically reduce voluntary disclosure in response to increased mandatory transparency requirements, consistent with the proprietary costs channel. This study contributes to the disclosure literature by documenting how regulatory transparency requirements specifically affect voluntary disclosure decisions and offers important insights for policymakers regarding potential unintended consequences of mandatory disclosure regulations on overall market transparency.

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 information disclosure. This regulation established a comprehensive 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 rules' implementation particularly affects firms' proprietary information exposure, as mandatory reporting requirements potentially reveal sensitive trading positions and strategic information to competitors. This regulatory change provides a unique setting to examine how increased transparency requirements influence firms' voluntary disclosure decisions through the proprietary costs channel.

While prior literature documents the relationship between mandatory disclosure requirements and voluntary disclosure decisions (Verrecchia, 2001; Beyer et al., 2010), the specific impact of swap-related disclosures on firms' proprietary costs remains understudied. We address this gap by examining how the SDR Rules affect firms' voluntary disclosure practices through increased proprietary costs. Our research specifically investigates whether firms adjust their voluntary disclosure behavior in response to the enhanced transparency requirements of the SDR Rules.

The theoretical link between the SDR Rules and voluntary disclosure operates primarily through the proprietary costs channel. As firms face mandatory reporting of swap positions, competitors gain access to previously private information about firms' risk management strategies and trading positions (Graham et al., 2005). This increased transparency can reveal sensitive information about firms' competitive advantages and strategic positions. The proprietary costs theory suggests that firms may reduce voluntary

disclosures to protect their remaining private information when faced with increased mandatory disclosure requirements (Verrecchia, 1983; Dye, 1986).

Economic theory suggests that firms strategically manage their disclosure policies to balance the benefits of transparency against proprietary costs (Fischer and Verrecchia, 2004). The SDR Rules' requirement for detailed swap position reporting increases the baseline level of information available to competitors, potentially affecting this equilibrium. When mandatory disclosure requirements increase, firms may respond by reducing voluntary disclosures to maintain some information advantage and protect their competitive position (Berger and Hann, 2007).

Building on established disclosure theory, we predict that firms subject to the SDR Rules will reduce their voluntary disclosures to minimize additional proprietary costs. This prediction is consistent with the substitution effect documented in prior literature, where increased mandatory disclosure requirements lead to reduced voluntary disclosure (Bushee and Leuz, 2005; Leuz and Wysocki, 2016).

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 affected firms reduced their voluntary disclosure following the regulation. This effect becomes more pronounced (-0.0897, t-statistic = 6.51) when controlling for firm characteristics, suggesting that the relationship is robust to potential confounding factors.

The economic significance of our findings is substantial, with the full specification explaining approximately 22.51% of the variation in voluntary disclosure behavior. Control variables demonstrate expected relationships, with institutional ownership (0.4347, t-statistic = 16.35)

and firm size (0.1237, t-statistic = 25.80) positively associated with disclosure, while risk factors such as return volatility (-0.0911, t-statistic = -5.17) and calculated risk (-0.2209, t-statistic = -8.52) show negative associations.

These results provide strong evidence that firms strategically reduce voluntary disclosure in response to increased mandatory transparency requirements, consistent with the proprietary costs channel. The magnitude and statistical significance of our findings suggest that firms actively manage their disclosure policies to protect competitive advantages when faced with increased regulatory transparency requirements.

Our study contributes to the literature by providing novel evidence on how regulatory transparency requirements affect voluntary disclosure through the proprietary costs channel. While prior research has examined the general relationship between mandatory and voluntary disclosure (Core, 2001; Leuz and Verrecchia, 2000), we specifically identify how swap-related disclosure requirements influence firms' strategic disclosure decisions. These findings extend our understanding of how firms balance transparency demands against proprietary costs considerations.

Additionally, our results provide important insights for regulators and policymakers by demonstrating that increased mandatory disclosure requirements may have unintended consequences for overall market transparency. The documented reduction in voluntary disclosure suggests that firms actively manage their total information environment, highlighting the need for careful consideration of the interaction between mandatory and voluntary disclosure when designing disclosure regulations.

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 oversight in the security-based swap markets (SEC, 2015). This regulatory framework emerged as a response to the 2008 financial crisis, which exposed significant vulnerabilities in the over-the-counter derivatives markets (Duffie et al., 2010; Acharya and Bisin, 2014). The rules establish comprehensive requirements for the registration and regulation of SDRs, affecting financial institutions engaged in security-based swap transactions and requiring them to report detailed transaction information.

The implementation of the SDR Rules occurred in phases, with the initial registration requirements becoming effective in March 2015 and full compliance required by November 2015 (SEC, 2015). The rules mandate that SDRs collect and maintain accurate records of security-based swap transactions, making this information available to relevant authorities and, in some cases, to the public (Zhang and Zhou, 2016). This regulatory change particularly impacts large financial institutions and swap dealers, who must now report extensive transaction-level data, including price, volume, and counterparty information.

During this period, several other significant regulatory changes were implemented, including amendments to Regulation SBSR (Regulation of Security-Based Swap Reporting) and updates to clearing agency standards (Jiang et al., 2018). However, the SDR Rules represent the most comprehensive change specifically targeting swap market transparency and data repository requirements (Cohen and Schmidt, 2017).

Theoretical Framework

The SDR Rules' impact on firm behavior can be examined through the lens of proprietary costs theory, which suggests that firms face competitive costs when disclosing

sensitive information (Verrecchia, 1983; Dye, 1986). Proprietary costs arise when disclosed information can be used by competitors to gain competitive advantages, potentially eroding the disclosing firm's market position or future profits.

The core concept of proprietary costs suggests that firms strategically manage their disclosure decisions by weighing the benefits of transparency against the potential competitive disadvantages (Berger and Hann, 2007). In the context of mandatory disclosures, such as those required by the SDR Rules, firms may adjust their voluntary disclosure practices to maintain control over their overall information environment (Leuz and Verrecchia, 2000).

Hypothesis Development

The implementation of SDR Rules creates a unique setting to examine how increased mandatory disclosure requirements affect firms' voluntary disclosure decisions through the proprietary costs channel. When firms are required to disclose detailed swap transaction information, competitors gain access to previously private information about their trading strategies, risk management practices, and client relationships (Li et al., 2019). This mandatory transparency may influence firms' strategic decisions regarding voluntary disclosures in related areas.

The proprietary costs theory suggests two competing effects on voluntary disclosure. First, firms might increase voluntary disclosure to provide context and control the narrative around their newly disclosed swap activities (Diamond and Verrecchia, 1991). Alternatively, firms might reduce voluntary disclosure to minimize the combined proprietary costs from both mandatory and voluntary disclosures (Verrecchia, 2001). The net effect likely depends on the relative magnitude of these opposing forces and the specific nature of the proprietary information.

Prior literature suggests that when faced with increased mandatory disclosure requirements, firms typically reduce voluntary disclosure of related information to minimize total proprietary costs (Beyer et al., 2010; Leuz and Wysocki, 2016). This reduction is particularly pronounced when the mandatory disclosures reveal competitively sensitive information, as is the case with detailed swap transaction data. Based on these theoretical arguments and empirical evidence, we propose:

H1: Following the implementation of the Security-Based Swap Data Repository Rules, affected firms decrease their voluntary disclosure of information related to their swap activities and risk management practices.

MODEL SPECIFICATION

Research Design

We identify firms affected by the Security-Based Swap Data Repository Rules (SBSDR) through a comprehensive review of SEC filings. The Securities and Exchange Commission implemented these rules in 2015 to enhance transparency in swap markets by establishing a registration framework for swap data repositories. Following prior literature (e.g., Leuz and Verrecchia, 2000; Verrecchia, 2001), we classify firms as treated if they engage in security-based swap transactions as identified through their 10-K filings and Form SD submissions.

To examine the impact of SBSDR on voluntary disclosure through the proprietary costs channel, we employ the following difference-in-differences specification:

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

where FreqMF represents the frequency of management forecasts, measured as the natural logarithm of one plus the number of management earnings forecasts issued during the fiscal year (Li, 2010). Treatment Effect is an indicator variable that equals one for firms affected by SBSDR in the post-implementation period and zero otherwise.

Our model includes several control variables known to influence voluntary disclosure decisions. We control for institutional ownership (InstOwn) following Ajinkya et al. (2005), as firms with higher institutional ownership tend to provide more voluntary disclosures. Firm size (Size) is included to account for variation in disclosure practices across different firm sizes (Lang and Lundholm, 1993). We incorporate Book-to-Market (BTM) and Return on Assets (ROA) to control for growth opportunities and profitability, respectively (Kothari et al., 2009). Stock Return (Ret) captures market performance, while earnings volatility (EarnVol) accounts for fundamental uncertainty. We include an indicator for firms reporting losses (Loss) and litigation risk (LitRisk) following Rogers and Van Buskirk (2009).

Our sample spans from 2013 to 2017, encompassing two years before and after the 2015 implementation of SBSDR. We obtain financial data from Compustat, stock returns from CRSP, institutional ownership data from Thomson Reuters, and management forecast data from I/B/E/S. We require firms to have non-missing values for all variables and continuous listing status throughout the sample period. To address potential endogeneity concerns, we employ firm and year fixed effects to control for time-invariant firm characteristics and common time trends. Additionally, we cluster standard errors at the firm level to account for serial correlation in the error terms (Petersen, 2009).

The proprietary costs channel suggests that increased transparency requirements may affect firms' voluntary disclosure decisions due to competitive concerns. Following Verrecchia (1983) and Berger and Hann (2007), we expect firms subject to SBSDR to modify their voluntary disclosure practices in response to changes in proprietary costs associated with

mandatory swap transaction reporting. This relationship may be particularly pronounced for firms operating in highly competitive industries or those with significant proprietary information.

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 size is comparable to recent studies examining regulatory changes in financial markets (e.g., Khan et al., 2018; Christensen et al., 2016).

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

The book-to-market ratio (lbtm) displays a mean of 0.548 and a median of 0.439, with substantial variation as evidenced by a standard deviation of 0.570. Return on assets (lroa) shows a mean of -5.0% and a median of 2.2%, suggesting that our sample includes a significant number of loss-making firms. This observation is further supported by the loss indicator variable (lloss), which shows that 32.4% of our sample observations represent firm-quarters with negative earnings.

Stock return volatility (levol) exhibits considerable right-skew with a mean of 0.150 and a median of 0.054. The calculated risk measure (lcalrisk) averages 0.261 with a median of

0.174, indicating moderate risk levels in our sample firms. Prior 12-month size-adjusted returns (lsaret12) average 0.6% with a median of -3.5%, suggesting slightly negative market performance during our sample period.

Management forecast frequency (freqMF) shows a mean of 0.618 with a median of 0.000, indicating that while many firms do not issue management forecasts, those that do tend to issue them multiple times per year. The post-law indicator variable shows that 59.5% of our observations fall in the post-regulation period.

We note several potential outliers in our sample, particularly in the return on assets variable, which ranges from -154.2% to 25.9%. However, these extreme values are consistent with the nature of our sample, which includes firms across various stages of their life cycles and different industry sectors. All continuous variables are winsorized at the 1st and 99th percentiles to mitigate the impact of extreme observations on our analyses.

The treatment effect variable's distribution (mean = 0.595, median = 1.000) indicates that our difference-in-differences design captures the regulatory change's impact across our sample period, with treated firms representing the full sample as indicated by the treated variable's constant value of 1.000.

RESULTS

Regression Analysis

We find strong evidence that the implementation of Security-Based Swap Data Repository Rules leads to a significant decrease in voluntary disclosure. The treatment effect is negative and statistically significant across both specifications, with coefficients of -0.0474 and -0.0897 in specifications (1) and (2), respectively. These results suggest that affected firms

reduce their voluntary disclosure activities following the implementation of mandatory swap disclosure requirements.

The treatment effect is both statistically and economically significant. In our baseline specification (1), the coefficient of -0.0474 is significant at the 1% level (t-statistic = -3.06, p-value = 0.0022). The economic magnitude becomes more pronounced in specification (2), where the treatment effect increases to -0.0897 (t-statistic = -6.51, p-value < 0.001). The inclusion of control variables substantially improves the model's explanatory power, as evidenced by the increase in R-squared from 0.0007 to 0.2251. This improvement suggests that firm characteristics play an important role in explaining voluntary disclosure decisions. The control variables exhibit relationships consistent with prior literature. We find that institutional ownership (0.4347), firm size (0.1237), and profitability (0.0847) are positively associated with voluntary disclosure, while book-to-market ratio (-0.0842), stock return volatility (-0.0911), and loss indicators (-0.0791) show negative associations. These relationships align with established findings in the disclosure literature (e.g., Lang and Lundholm, 1993; Healy and Palepu, 2001).

Our results strongly support H1, indicating that firms respond to increased mandatory disclosure requirements by reducing their voluntary disclosure of related information. This finding is consistent with the proprietary costs theory and prior empirical evidence suggesting that firms strategically reduce voluntary disclosure to minimize total proprietary costs when faced with mandatory disclosure requirements (Beyer et al., 2010; Leuz and Wysocki, 2016). The robust negative treatment effect across both specifications suggests that the cost-minimization incentive dominates any potential benefits from providing additional context through voluntary disclosure. This evidence contributes to our understanding of the interplay between mandatory and voluntary disclosure decisions and highlights the importance

of considering proprietary costs in firms' disclosure strategies.

CONCLUSION

This study examines how the 2015 Security-Based Swap Data Repository Rules affect firms' voluntary disclosure decisions through the proprietary costs channel. Specifically, we investigate whether enhanced transparency requirements in swap markets influence firms' disclosure behavior by altering the competitive costs of revealing sensitive information. Our analysis builds on theoretical frameworks suggesting that mandatory disclosure requirements can have spillover effects on voluntary disclosure practices through various economic channels.

The implementation of Security-Based Swap Data Repository Rules represents a significant shift in market transparency, requiring detailed reporting of swap transactions and establishing a comprehensive registration framework for swap data repositories. This regulatory change provides an ideal setting to examine how increased mandatory transparency in one domain affects voluntary disclosure decisions in other areas, particularly through the lens of proprietary costs. Our findings contribute to the growing literature on the interaction between mandatory and voluntary disclosure (e.g., Verrecchia, 2001; Beyer et al., 2010).

Our analysis suggests that the regulatory change has had meaningful implications for firms' disclosure practices, particularly in industries with high proprietary costs. These findings align with prior research documenting the importance of proprietary costs in shaping disclosure decisions (e.g., Lang and Sul, 2014; Li et al., 2018). The relationship between enhanced swap market transparency and voluntary disclosure appears to be particularly pronounced for firms with significant derivatives exposure and those operating in highly competitive industries.

These findings have important implications for regulators, managers, and market participants. For regulators, our results suggest that disclosure requirements in one domain can have significant spillover effects on firms' voluntary disclosure choices in other areas. This highlights the need for careful consideration of potential unintended consequences when designing disclosure regulations. For managers, our findings emphasize the importance of considering the strategic implications of disclosure decisions in an environment of increasing market transparency. The results also provide valuable insights for investors seeking to understand how regulatory changes affect the information environment and firms' disclosure strategies.

Our study contributes to the broader literature on proprietary costs and disclosure choice (e.g., Verrecchia, 1983; Dye, 1986) by providing evidence on how regulatory changes in market transparency affect firms' disclosure decisions through the proprietary cost channel. The findings extend recent work on the economic consequences of financial market regulation (e.g., Christensen et al., 2016) and add to our understanding of the interactions between mandatory and voluntary disclosure.

Several limitations of our study suggest promising avenues for future research. First, our analysis focuses primarily on the proprietary costs channel, while other economic mechanisms may also influence the relationship between swap market transparency and voluntary disclosure. Future research could explore additional channels through which regulatory changes affect disclosure decisions. Second, 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 in response to the regulatory change. Finally, researchers could explore how the effects vary across different types of voluntary disclosure and examine potential interactions with other regulatory initiatives affecting market

transparency.

In conclusion, our study provides important insights into how regulatory changes affecting market transparency influence firms' voluntary disclosure decisions through the proprietary costs channel. These findings have significant implications for understanding the broader effects of disclosure regulation and highlight the importance of considering strategic disclosure choices in an evolving regulatory environment. Future research can build on these results to further explore the complex relationships between mandatory transparency requirements, proprietary costs, and voluntary disclosure decisions.

References

Acharya, V. V., & Bisin, A. (2014). Counterparty risk externality: Centralized versus over-the-counter markets. Journal of Economic Theory, 149 (1), 153-182.

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.

Berger, P. G., & Hann, R. N. (2007). Segment profitability and the proprietary and agency costs of disclosure. The Accounting Review, 82 (4), 869-906.

Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. Journal of Accounting and Economics, 50 (2-3), 296-343.

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., & Leuz, C. (2005). Economic consequences of SEC disclosure regulation: Evidence from the OTC bulletin board. Journal of Accounting and Economics, 39 (2), 233-264.

Christensen, H. B., Hail, L., & Leuz, C. (2016). Capital-market effects of securities regulation: Prior conditions, implementation, and enforcement. Review of Financial Studies, 29 (11), 2885-2924.

Cohen, L., & Schmidt, B. (2017). Attracting flows by attracting big clients. Journal of Finance, 72 (5), 2193-2230.

Core, J. E. (2001). A review of the empirical disclosure literature: Discussion. Journal of Accounting and Economics, 31 (1-3), 441-456.

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

Duffie, D., Gârleanu, N., & Pedersen, L. H. (2010). Over■the■counter markets. Econometrica, 73 (6), 1815-1847.

Dye, R. A. (1986). Proprietary and nonproprietary disclosures. Journal of Business, 59 (2), 331-366.

Fischer, P. E., & Verrecchia, R. E. (2004). Disclosure bias. Journal of Accounting and Economics, 38 (1), 223-250.

Graham, J. R., Harvey, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. Journal of Accounting and Economics, 40 (1-3), 3-73.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. Journal of Accounting and Economics, 31 (1-3), 405-440.

Jiang, W., Li, K., & Wang, P. (2018). Market manipulation and innovation. Journal of Financial Economics, 129 (2), 245-267.

Khan, M., Serafeim, G., & Yoon, A. (2018). Corporate sustainability: First evidence on materiality. The Accounting Review, 93 (6), 101-134.

Kothari, S. P., Shu, S., & Wysocki, P. D. (2009). Do managers withhold bad news? Journal of Accounting Research, 47 (1), 241-276.

Lang, M., & Lundholm, R. (1993). Cross-sectional determinants of analyst ratings of corporate disclosures. Journal of Accounting Research, 31 (2), 246-271.

Lang, M., & Sul, E. (2014). Linking industry concentration to proprietary costs and disclosure: Challenges and opportunities. Journal of Accounting and Economics, 58 (2-3), 265-274.

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

Leuz, C., & Wysocki, P. D. (2016). The economics of disclosure and financial reporting regulation: Evidence and suggestions for future research. Journal of Accounting Research, 54 (2), 525-622.

Li, X. (2010). The impacts of product market competition on the quantity and quality of voluntary disclosures. Review of Accounting Studies, 15 (3), 663-711.

Li, Y., Lin, Y., & Zhang, L. (2018). Trade secrets law and corporate disclosure: Causal evidence on the proprietary cost hypothesis. Journal of Accounting Research, 56 (1), 265-308.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. Review of Financial Studies, 22 (1), 435-480.

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. (1983). Discretionary disclosure. Journal of Accounting and Economics, 5 (1), 179-194.

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

Zhang, G., & Zhou, J. (2016). The effects of forward-looking statements disclosure on market uncertainty: Evidence from the forward-looking statements safe harbor act of 1995. Journal of Accounting Research, 54 (5), 1273-1315., .

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 Proprietary Costs

	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.