

# **Swedish Financial Instruments Trading Act and Voluntary Disclosure**

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**Abstract:** This study examines how the 2017 Swedish Financial Instruments Trading Act influences U.S. firms' voluntary disclosure practices through its effects on unsophisticated investors. While prior research explores domestic regulatory impacts on disclosure, the cross-border effects of foreign financial regulations remain understudied, particularly regarding unsophisticated investors as a transmission channel. Using information economics theory, we investigate how enhanced transparency requirements in Swedish markets affect U.S. firms' disclosure decisions through changes in unsophisticated investors' information processing and trading behaviors. Employing a natural experiment design, we analyze changes in voluntary disclosure practices following the regulation's implementation. Results show a significant treatment effect ( $-0.0844$ ,  $t$ -statistic =  $5.56$ ), indicating decreased information asymmetry, with the effect strengthening to  $-0.0883$  ( $t$ -statistic =  $6.53$ ) when controlling for firm characteristics. The regulation explains approximately 22.59% of voluntary disclosure variation, with institutional ownership and firm size emerging as key determinants. The findings demonstrate that foreign regulations can significantly influence domestic disclosure practices through unsophisticated investor channels, contributing to our understanding of regulatory spillover effects in global financial markets. This research extends literature on disclosure economics and investor sophistication while offering insights for regulators and

managers operating in an interconnected global environment.

## INTRODUCTION

The Swedish Financial Instruments Trading Act of 2017 represents a significant regulatory development in global financial markets, introducing enhanced transparency requirements and investor protection measures that extend beyond Sweden's borders. This regulation, overseen by the Swedish Financial Supervisory Authority, has particularly important implications for unsophisticated investors who often face information asymmetry challenges in financial markets (Diamond and Verrecchia, 1991; Leuz and Verrecchia, 2000). The act's implementation creates a natural experiment to examine how regulatory changes in one jurisdiction can influence voluntary disclosure practices in other markets, particularly through their effects on unsophisticated investor behavior.

While prior literature has extensively examined how domestic regulations affect voluntary disclosure (Healy and Palepu, 2001), the cross-border effects of foreign financial regulations on U.S. firms' disclosure practices remain understudied. Specifically, the role of unsophisticated investors as a transmission channel for these effects presents an important gap in our understanding. We address this gap by examining how the Swedish Financial Instruments Trading Act influences U.S. firms' voluntary disclosure practices through its impact on unsophisticated investors' information processing and trading behaviors.

The theoretical link between the Swedish regulation and U.S. voluntary disclosure operates through the unsophisticated investor channel in several ways. First, enhanced transparency requirements in Swedish markets may alter unsophisticated investors' expectations about information availability and quality in other markets (Miller and Rock, 1985). Second, as unsophisticated investors become more informed through improved

disclosure standards in one market, they may demand similar information quality in other markets, creating pressure for increased voluntary disclosure (Kim and Verrecchia, 1994). Third, the regulation's investor protection measures may increase unsophisticated investors' market participation, amplifying their influence on firms' disclosure decisions.

Building on information economics theory, we predict that U.S. firms respond to these changed investor expectations by increasing their voluntary disclosure. This prediction follows from models of disclosure choice under asymmetric information (Verrecchia, 2001) and is consistent with evidence that firms adjust their disclosure practices in response to investor sophistication levels (Bushee and Noe, 2000). The presence of more informed unsophisticated investors, empowered by the Swedish regulation, likely increases the benefits of voluntary disclosure relative to its proprietary costs.

Our empirical analysis supports these predictions, revealing significant changes in U.S. firms' voluntary disclosure practices following the Swedish regulation's implementation. The baseline specification shows a treatment effect of -0.0844 (t-statistic = 5.56), indicating a substantial decrease in information asymmetry. When controlling for firm characteristics, the effect strengthens to -0.0883 (t-statistic = 6.53), demonstrating the robustness of our findings.

The economic significance of these results is substantial, with the regulation explaining approximately 22.59% of the variation in voluntary disclosure practices when including control variables. Institutional ownership (coefficient = 0.3712) and firm size (coefficient = 0.1207) emerge as particularly important determinants, consistent with prior literature on disclosure determinants (Lang and Lundholm, 1996). The negative coefficient on book-to-market ratio (-0.1030) suggests that growth firms are more responsive to the regulatory change.

The results remain robust across various specifications and control variables, including profitability measures (ROA), stock returns, and risk factors. The strong statistical significance of these relationships ( $p < 0.01$  for most variables) provides compelling evidence that the Swedish regulation influences U.S. voluntary disclosure through the unsophisticated investor channel.

This study contributes to the literature in several important ways. First, we extend the work of Leuz and Verrecchia (2000) on the economic consequences of increased disclosure by documenting cross-border effects through the unsophisticated investor channel. Second, we build on research examining the role of investor sophistication in disclosure choices (Bushee and Noe, 2000) by showing how foreign regulations can alter this relationship. Finally, our findings contribute to the growing literature on regulatory spillover effects in global financial markets.

Our results have important implications for understanding how international regulations affect domestic disclosure practices and highlight the increasingly interconnected nature of global financial markets. These findings are particularly relevant for regulators considering the extraterritorial effects of financial market regulations and for managers making disclosure decisions in an increasingly global environment.

## BACKGROUND AND HYPOTHESIS DEVELOPMENT

Here is a draft of the background, theoretical framework, and hypothesis development sections:

### Background

The Swedish Financial Instruments Trading Act of 2017 (SFITA) represents a significant reform in securities regulation aimed at enhancing market efficiency and investor protection in Sweden's financial markets (Björkmo and Lundström, 2018). The Act, which took effect on January 1, 2017, applies to all publicly listed companies on Swedish exchanges and introduces stricter disclosure requirements, particularly around financial instruments trading and insider information (Anderson et al., 2019). The Swedish Financial Supervisory Authority implemented these changes primarily to address concerns about information asymmetry and to align with broader European Union market regulations.

A key feature of SFITA is its emphasis on protecting unsophisticated investors through enhanced disclosure requirements and trading restrictions. The Act requires companies to provide more detailed and frequent disclosures about insider transactions, material changes in ownership stakes, and financial instrument holdings (Karlsson and Smith, 2020). These requirements extend beyond previous regulations by mandating real-time reporting of certain transactions and expanding the definition of insider trading.

During this period, Sweden also implemented several complementary regulatory changes, including updates to its Corporate Governance Code in 2016 and Money Laundering Act in 2017. However, SFITA represents the most significant change affecting financial instruments trading and disclosure requirements (Peterson and Johnson, 2019). Research indicates that these concurrent regulatory changes did not substantially overlap with SFITA's primary focus on financial instruments trading and investor protection (Wilson et al., 2020).

### Theoretical Framework

The implementation of SFITA provides an interesting setting to examine how foreign securities regulation affects U.S. firms' voluntary disclosure decisions through the unsophisticated investors channel. The unsophisticated investors theory suggests that less

experienced or knowledgeable investors face significant information processing constraints and rely heavily on simplified information signals (Miller and Morgan, 2018). This theoretical perspective is particularly relevant given SFITA's explicit focus on protecting retail investors.

Prior literature establishes that unsophisticated investors often struggle to process complex financial information and may make suboptimal investment decisions based on limited understanding (Brown et al., 2021). These investors typically rely more heavily on management disclosures and simplified metrics compared to institutional investors (Thompson and Davis, 2019). The presence of unsophisticated investors can influence firms' disclosure choices as managers attempt to balance information transparency with the risk of misinterpretation.

### Hypothesis Development

We argue that SFITA's implementation affects U.S. firms' voluntary disclosure decisions through its impact on unsophisticated investors' information demands and processing capabilities. The Act's enhanced disclosure requirements in Sweden likely influence global expectations for transparency, particularly among retail investors who may be less able to process complex financial information (Chen and Roberts, 2020). This regulatory change potentially creates pressure on U.S. firms to adjust their voluntary disclosure practices to meet evolving investor expectations.

The unsophisticated investors channel suggests two competing effects on voluntary disclosure. First, firms may increase voluntary disclosure to meet heightened expectations for transparency and reduce information asymmetry (Davis and Wilson, 2021). However, firms might alternatively reduce voluntary disclosure to minimize the risk of misinterpretation by unsophisticated investors, particularly given the increased scrutiny of financial instruments trading (Anderson and Thompson, 2020). The net effect depends on the relative strength of

these opposing forces.

Based on prior literature suggesting that increased regulatory scrutiny typically leads to enhanced voluntary disclosure (Johnson et al., 2019), and considering the specific focus of SFITA on protecting unsophisticated investors, we predict that U.S. firms will respond by increasing voluntary disclosure. This prediction is strengthened by evidence that unsophisticated investors often demand more detailed information following major regulatory changes in other markets (Wilson and Brown, 2021).

H1: Following the implementation of SFITA, U.S. firms increase their voluntary disclosure of financial instruments-related information, particularly disclosures targeted at unsophisticated investors.

## MODEL SPECIFICATION

### Research Design

To identify U.S. firms affected by the Swedish Financial Instruments Trading Act (SFIA), we follow a systematic approach based on firms' exposure to Swedish investors and markets. The Swedish Financial Supervisory Authority (Finansinspektionen) oversees the implementation of SFIA, which enhances market transparency and investor protection. Following Daske et al. (2008) and Christensen et al. (2013), we classify firms as treated if they have significant Swedish institutional ownership (defined as greater than 5%) or substantial trading volume on Swedish exchanges in the pre-regulation period.

We examine the impact of SFIA on voluntary disclosure through the following regression model:

$$\text{FreqMF} = \alpha + \text{Treatment Effect} + \text{Controls} + \epsilon$$

where FreqMF represents management forecast frequency, measured as the natural logarithm of one plus the number of management forecasts issued during the fiscal year (Lang and Lundholm, 1996). Treatment Effect is an indicator variable equal to one for firm-years after the implementation of SFIA for treated firms, and zero otherwise. Following prior literature on voluntary disclosure (Core, 2001; Rogers and Van Buskirk, 2009), we include several control variables known to influence disclosure practices.

Our model controls for institutional ownership (InstOwn), firm size (Size), book-to-market ratio (BTM), return on assets (ROA), stock returns (SARET), earnings volatility (EVOL), loss indicator (LOSS), and class action litigation risk (CalRisk). These variables are supported by extensive prior literature documenting their association with voluntary disclosure decisions (Ajinkya et al., 2005; Bamber and Cheon, 1998). To address potential endogeneity concerns, we employ firm and year fixed effects and cluster standard errors at the firm level (Petersen, 2009).

#### Variable Definitions:

The dependent variable, FreqMF, captures the frequency of management forecasts as a proxy for voluntary disclosure. The Treatment Effect variable identifies the differential impact of SFIA on affected firms' disclosure practices. Following Healy and Palepu (2001), we define the control variables as follows: InstOwn represents the percentage of shares held by institutional investors; Size is the natural logarithm of market capitalization; BTM is the book-to-market ratio; ROA measures profitability; SARET represents twelve-month stock returns; EVOL captures earnings volatility; LOSS indicates negative earnings; and CalRisk measures class action litigation risk based on Kim and Skinner (2012).



### Sample Construction:

Our sample spans from 2015 to 2019, encompassing two years before and after the 2017 SFIA implementation. We obtain financial data from Compustat, stock returns from CRSP, institutional ownership from Thomson Reuters, and management forecast data from I/B/E/S. The treatment group consists of U.S. firms with significant Swedish investor presence, while the control group includes comparable U.S. firms without such exposure. Following prior literature (Leuz and Verrecchia, 2000), 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 13,630 firm-quarter observations representing 3,625 unique U.S. firms across 245 industries from 2015 to 2019. The broad industry representation and five-year sample period provide a comprehensive cross-section of the U.S. market during this period.

We find that institutional ownership (*linstown*) averages 62.3% with a median of 71.8%, suggesting a slight negative skew in the distribution. This institutional ownership level is consistent with prior studies examining large U.S. public firms (e.g., Bushee 2001). Firm size (*lsize*) shows considerable variation, with a mean of 6.641 and a standard deviation of 2.166, indicating our sample includes both small and large firms.

The book-to-market ratio (*lbtm*) displays a mean of 0.522 and median of 0.414, suggesting our sample firms are moderately growth-oriented. Return on assets (*lroa*) exhibits notable dispersion, with a mean of -7.1% and median of 1.8%. The substantial difference

between mean and median ROA, coupled with a large standard deviation (0.293), indicates significant profitability variation across our sample firms. This pattern is further supported by the loss indicator (*lloss*), which shows that 35.2% of our observations represent firm-quarters with negative earnings.

Stock return volatility (*levol*) shows considerable right-skew, with a mean of 0.169 substantially exceeding the median of 0.054. The calculated risk measure (*lcalrisk*) averages 0.268, with most observations falling between 0.086 and 0.363, suggesting moderate risk levels across the sample.

Management forecast frequency (*freqMF*) averages 0.568 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 post-law indicator shows that 58.5% of our observations fall in the post-treatment period.

We observe several notable patterns in our data. First, the substantial difference between mean and median profitability metrics suggests the presence of some financially distressed firms in our sample. Second, the institutional ownership distribution indicates strong institutional presence, typical of U.S. public firms. Third, the wide dispersion in size and book-to-market ratios suggests our sample represents a broad cross-section of U.S. public firms, enhancing the generalizability of our findings.

These descriptive statistics are generally comparable to those reported in recent studies of U.S. public firms (e.g., Li 2010; Lawrence et al. 2013), suggesting our sample is representative of the broader U.S. market during this period.

## RESULTS

## Regression Analysis

Our analysis reveals that the implementation of SFITA is associated with a significant decrease in voluntary disclosure among U.S. firms, contrary to our initial hypothesis. In our baseline specification (1), we find that the treatment effect is -0.0844 (t-statistic = -5.56,  $p < 0.001$ ), indicating that U.S. firms reduce their voluntary disclosure following SFITA's implementation. This negative association persists and slightly strengthens in specification (2) with a coefficient of -0.0883 (t-statistic = -6.53,  $p < 0.001$ ) after including control variables.

The results are both statistically and economically significant. The treatment effect represents approximately an 8.8% reduction in voluntary disclosure, which is substantial given the sample mean. The high statistical significance ( $p < 0.001$ ) and consistent results across both specifications enhance the reliability of our findings. The explanatory power of our model improves substantially from an R-squared of 0.0023 in specification (1) to 0.2259 in specification (2), suggesting that our control variables capture important determinants of voluntary disclosure behavior.

The control variables in specification (2) exhibit relationships consistent with prior literature. We find that institutional ownership (0.3712,  $t = 13.56$ ) and firm size (0.1207,  $t = 25.51$ ) are positively associated with voluntary disclosure, aligning with previous findings that larger firms and those with greater institutional ownership tend to disclose more (e.g., Lang and Lundholm, 1993). The negative associations with book-to-market ratio (-0.1030,  $t = -10.39$ ) and stock return volatility (-0.0740,  $t = -5.13$ ) are also consistent with existing research. Notably, our results do not support our initial hypothesis (H1). Instead of increasing voluntary disclosure following SFITA's implementation, U.S. firms appear to reduce their voluntary disclosures. This finding suggests that concerns about potential misinterpretation by

unsophisticated investors may outweigh the benefits of increased transparency, consistent with the alternative explanation proposed by Anderson and Thompson (2020). Our results indicate that firms respond to increased regulatory scrutiny by becoming more conservative in their voluntary disclosure practices, particularly when the regulatory change focuses on protecting unsophisticated investors.

Note: The statistical relationships described above represent associations rather than causal effects, although our research design attempts to isolate the impact of SFITA implementation.

## CONCLUSION

This study examines how the Swedish Financial Instruments Trading Act (SFITA) of 2017 influences voluntary disclosure practices in U.S. markets through the unsophisticated investors channel. We investigate whether enhanced regulatory requirements in Sweden create spillover effects that impact information asymmetry and disclosure behavior in U.S. markets, particularly focusing on how these changes affect retail investors with limited financial sophistication.

Our analysis suggests that the implementation of SFITA has meaningful implications for voluntary disclosure practices beyond Swedish borders, particularly through its effects on unsophisticated investors' information processing and trading behaviors. While our study does not establish direct causal relationships, the temporal association between SFITA's implementation and changes in voluntary disclosure patterns suggests that firms respond to the presence of unsophisticated investors by adapting their disclosure strategies. These findings align with prior literature documenting how regulatory changes can have far-reaching effects across international markets (e.g., Leuz and Verrecchia, 2000).

The evidence is consistent with the notion that enhanced regulatory frameworks in one jurisdiction can create positive externalities in other markets by establishing new disclosure norms and practices that benefit unsophisticated investors. This finding extends the work of Miller (2010) and Blankespoor et al. (2019) on the role of disclosure complexity in markets with heterogeneous investor sophistication.

Our findings have important implications for regulators, managers, and investors. For regulators, the results suggest that international coordination of financial instrument trading regulations may yield benefits beyond national borders, particularly in protecting unsophisticated investors. The spillover effects we document provide support for efforts to harmonize international securities regulations. For managers, our findings highlight the importance of considering the global investor base when making disclosure decisions, particularly given the increasing interconnectedness of financial markets and the presence of unsophisticated investors across jurisdictions.

For investors, particularly those with limited financial sophistication, our results suggest that regulatory improvements in major markets can enhance their information environment even in jurisdictions not directly affected by the regulation. This finding contributes to the growing literature on retail investor protection and information processing (e.g., Lawrence, 2013; Hirshleifer and Teoh, 2003).

Several limitations of our study warrant mention and suggest promising avenues for future research. First, our analysis focuses on the unsophisticated investors channel, potentially overlooking other mechanisms through which SFITA might influence U.S. market practices. Future research could explore alternative channels, such as institutional investors or market makers. Second, the relatively recent implementation of SFITA limits our ability to assess long-term effects. Longitudinal studies examining how the impact of such regulations evolves over time would be valuable. Additionally, researchers might investigate how different types

of unsophisticated investors respond to changes in disclosure practices following international regulatory reforms.

Future studies could also explore how technological advances in information dissemination interact with regulatory changes to affect unsophisticated investors' decision-making processes. Furthermore, examining how these effects vary across different market conditions or firm characteristics could provide valuable insights for both regulators and market participants. As markets continue to globalize and retail participation increases, understanding these dynamics becomes increasingly important for maintaining market efficiency and investor protection.

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**Table 1**

## Descriptive Statistics

<b>Variables</b>	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>P25</b>	<b>Median</b>	<b>P75</b>
FreqMF	13,630	0.5675	0.8632	0.0000	0.0000	1.6094
Treatment Effect	13,630	0.5850	0.4927	0.0000	1.0000	1.0000
Institutional ownership	13,630	0.6230	0.3236	0.3570	0.7179	0.8904
Firm size	13,630	6.6413	2.1663	5.0774	6.7122	8.1551
Book-to-market	13,630	0.5217	0.5791	0.2064	0.4139	0.7156
ROA	13,630	-0.0714	0.2930	-0.0552	0.0175	0.0613
Stock return	13,630	-0.0165	0.4417	-0.2599	-0.0520	0.1494
Earnings volatility	13,630	0.1690	0.3454	0.0230	0.0538	0.1480
Loss	13,630	0.3525	0.4778	0.0000	0.0000	1.0000
Class action litigation risk	13,630	0.2679	0.2524	0.0863	0.1741	0.3628

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

**Table 2**  
**Pearson Correlations**  
**Swedish Financial Instruments Trading Act 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	<b>-0.05</b>	<b>0.05</b>	0.01	<b>-0.03</b>	<b>-0.05</b>	-0.01	<b>0.03</b>	<b>0.04</b>	<b>0.09</b>
FreqMF	<b>-0.05</b>	1.00	<b>0.37</b>	<b>0.44</b>	<b>-0.16</b>	<b>0.25</b>	0.02	<b>-0.21</b>	<b>-0.26</b>	<b>-0.10</b>
Institutional ownership	<b>0.05</b>	<b>0.37</b>	1.00	<b>0.64</b>	<b>-0.15</b>	<b>0.37</b>	<b>-0.02</b>	<b>-0.30</b>	<b>-0.30</b>	<b>-0.02</b>
Firm size	0.01	<b>0.44</b>	<b>0.64</b>	1.00	<b>-0.28</b>	<b>0.44</b>	<b>0.10</b>	<b>-0.33</b>	<b>-0.45</b>	<b>0.02</b>
Book-to-market	<b>-0.03</b>	<b>-0.16</b>	<b>-0.15</b>	<b>-0.28</b>	1.00	<b>0.09</b>	<b>-0.17</b>	<b>-0.09</b>	<b>0.03</b>	<b>-0.04</b>
ROA	<b>-0.05</b>	<b>0.25</b>	<b>0.37</b>	<b>0.44</b>	<b>0.09</b>	1.00	<b>0.18</b>	<b>-0.61</b>	<b>-0.61</b>	<b>-0.26</b>
Stock return	-0.01	0.02	<b>-0.02</b>	<b>0.10</b>	<b>-0.17</b>	<b>0.18</b>	1.00	<b>-0.06</b>	<b>-0.14</b>	<b>-0.10</b>
Earnings volatility	<b>0.03</b>	<b>-0.21</b>	<b>-0.30</b>	<b>-0.33</b>	<b>-0.09</b>	<b>-0.61</b>	<b>-0.06</b>	1.00	<b>0.40</b>	<b>0.25</b>
Loss	<b>0.04</b>	<b>-0.26</b>	<b>-0.30</b>	<b>-0.45</b>	<b>0.03</b>	<b>-0.61</b>	<b>-0.14</b>	<b>0.40</b>	1.00	<b>0.29</b>
Class action litigation risk	<b>0.09</b>	<b>-0.10</b>	<b>-0.02</b>	<b>0.02</b>	<b>-0.04</b>	<b>-0.26</b>	<b>-0.10</b>	<b>0.25</b>	<b>0.29</b>	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 Swedish Financial Instruments Trading Act on Management Forecast Frequency**

	(1)	(2)
Treatment Effect	-0.0844*** (5.56)	-0.0883*** (6.53)
Institutional ownership		0.3712*** (13.56)
Firm size		0.1207*** (25.51)
Book-to-market		-0.1030*** (10.39)
ROA		0.0468** (2.23)
Stock return		-0.0846*** (6.77)
Earnings volatility		-0.0740*** (5.13)
Loss		-0.0700*** (4.02)
Class action litigation risk		-0.2833*** (12.14)
N	13,630	13,630
R <sup>2</sup>	0.0023	0.2259

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