Markets in Financial Instruments Directive Italy and Voluntary Disclosure

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Abstract: The Markets in Financial Instruments Directive (MiFID), implemented in Italy in 2007, represents a watershed moment in European securities regulation that fundamentally transformed investor protection standards and market transparency requirements through enhanced conduct rules, strengthened disclosure obligations, and more rigorous investor classification systems. While prior research extensively examines how regulatory changes affect domestic disclosure practices, the cross-border transmission mechanisms through investor sophistication channels remain underexplored. This study addresses this critical gap by investigating how European regulatory reforms designed to protect unsophisticated investors influence voluntary disclosure decisions of U.S. firms. Building on signaling theory and agency theory, we argue that MiFID's investor protection enhancements created a regulatory environment where the signaling value of voluntary disclosure decreased for firms seeking to attract unsophisticated investors, as enhanced regulatory protections and standardized information provision mechanisms partially substituted for firms' voluntary communications. Our empirical analysis provides robust evidence supporting the predicted negative relationship, with treatment effects demonstrating a consistent and statistically significant reduction in voluntary disclosure, with coefficients ranging from -0.0455 to -0.0797, all significant at the 1% level. The most conservative estimate indicates that MiFID implementation led to a 4.55 percentage point decrease in

voluntary disclosure measures, representing economically meaningful changes in corporate reporting behavior. This study contributes novel evidence of cross-border regulatory spillovers through investor sophistication channels, extending existing literature by demonstrating that investor protection enhancements can create unintended consequences in foreign markets through substitution mechanisms, with important implications for global financial regulation coordination.

INTRODUCTION

The Markets in Financial Instruments Directive (MiFID), implemented in Italy in 2007 under the oversight of Commissione Nazionale per le Società e la Borsa (CONSOB), represents a watershed moment in European securities regulation that fundamentally transformed investor protection standards and market transparency requirements. This comprehensive regulatory framework enhanced conduct rules for financial intermediaries, strengthened disclosure obligations, and established more rigorous investor classification systems designed to protect retail participants from sophisticated financial products (Moloney, 2008; Ferrarini and Moloney, 2012). The directive's emphasis on investor categorization and protection mechanisms created unprecedented regulatory pressure on financial institutions to reassess their client engagement strategies and disclosure practices across global markets.

The implementation of MiFID in Italy generated significant spillover effects on U.S. voluntary disclosure practices through its impact on unsophisticated investors, a channel that has received limited attention in the accounting literature despite its theoretical importance. While prior research extensively examines how regulatory changes affect domestic disclosure practices (Leuz and Wysocki, 2016; Christensen et al., 2013), the cross-border transmission mechanisms through investor sophistication channels remain underexplored. This study addresses a critical gap by investigating how European regulatory reforms designed to protect unsophisticated investors influence voluntary disclosure decisions of U.S. firms, raising

fundamental questions about the global interconnectedness of capital markets and the unintended consequences of regional regulatory initiatives on international corporate reporting practices.

The economic mechanism linking MiFID implementation to U.S. voluntary disclosure operates through the unsophisticated investor channel, which theory suggests should reduce firms' incentives to provide voluntary information. Signaling theory posits that firms use voluntary disclosure to differentiate themselves from competitors and reduce information asymmetries with investors (Spence, 1973; Ross, 1977). However, when regulatory changes increase the protection and information rights of unsophisticated investors, as MiFID accomplished through enhanced conduct rules and transparency requirements, the marginal benefit of voluntary disclosure diminishes. This occurs because unsophisticated investors, who traditionally rely more heavily on voluntary disclosures due to their limited analytical capabilities (Miller, 2010; Blankespoor et al., 2014), gain access to enhanced regulatory protections and standardized information provision mechanisms that partially substitute for firms' voluntary communications.

Building on the theoretical framework of Verrecchia (2001) and Dye (2001), we argue that MiFID's investor protection enhancements created a regulatory environment where the signaling value of voluntary disclosure decreased for firms seeking to attract unsophisticated investors. The directive's requirements for investment firms to provide comprehensive product information, risk disclosures, and suitability assessments effectively reduced the information advantage that voluntary corporate disclosures previously provided to this investor segment (Avgouleas, 2009). Furthermore, agency theory suggests that when external regulatory mechanisms strengthen monitoring and information provision, managers face reduced pressure to voluntarily disclose information as a bonding mechanism (Jensen and Meckling, 1976; Watts and Zimmerman, 1986). The enhanced investor protection framework established by

MiFID therefore created conditions where U.S. firms could reduce voluntary disclosure without significantly disadvantaging their unsophisticated investor base.

The substitution effect between regulatory protection and voluntary disclosure becomes particularly pronounced when considering the cost-benefit calculus of corporate disclosure decisions. Diamond and Verrecchia (1991) demonstrate that firms balance the benefits of reduced information asymmetry against the proprietary costs of disclosure. MiFID's implementation effectively altered this equilibrium by providing alternative information channels and protection mechanisms for unsophisticated investors, thereby reducing the net benefits of voluntary disclosure for firms targeting this investor segment. We therefore predict that the implementation of MiFID in Italy, through its enhancement of unsophisticated investor protection, led to a systematic reduction in voluntary disclosure among U.S. firms, particularly those with greater exposure to this investor category.

Our empirical analysis provides robust evidence supporting the predicted negative relationship between MiFID implementation and U.S. voluntary disclosure through the unsophisticated investor channel. The treatment effect across our three specifications demonstrates a consistent and statistically significant reduction in voluntary disclosure, with coefficients ranging from -0.0455 to -0.0797, all significant at the 1% level (t-statistics of 3.77 to 7.72). The most conservative estimate from our fully specified model (Specification 3) indicates that MiFID implementation led to a 4.55 percentage point decrease in voluntary disclosure measures, representing economically meaningful changes in corporate reporting behavior. The progression of R-squared values from 0.0019 in the baseline specification to 0.8531 in the full model demonstrates the importance of controlling for firm-specific characteristics while maintaining the statistical significance of our primary treatment effect.

The control variables reveal important insights into the determinants of voluntary disclosure and validate our identification strategy. Firm size emerges as the most consistent

predictor across specifications, with coefficients ranging from 0.0948 to 0.1356 (t-statistics of 10.65 to 10.91), confirming established findings that larger firms engage in more voluntary disclosure (Lang and Lundholm, 1993). The loss variable demonstrates strong negative associations with disclosure (-0.1197 to -0.2137, t-statistics of -8.31 to -10.74), consistent with managers' reluctance to provide voluntary information during periods of poor performance (Skinner, 1994). Notably, the institutional ownership variable shows dramatically different effects across specifications, with a strong positive coefficient (0.8019, t=17.37) in Specification 2 becoming insignificant in the full model, suggesting important interactions between institutional monitoring and firm fixed effects that our identification strategy appropriately addresses.

The robustness of our findings across multiple specifications and the substantial improvement in explanatory power (R-squared increasing to 85.31% in the full model) provide strong support for our identification of the unsophisticated investor channel. The negative and significant coefficients for stock return volatility in Specification 3 (-0.1197, t=-3.19) and prior stock returns across all specifications (-0.0376 to -0.0423) align with theoretical predictions about disclosure incentives during periods of uncertainty and poor performance. The time trend variable's evolution from significantly negative in early specifications to insignificant in the full model (-0.0016, t=-0.28) indicates that our treatment identification successfully captures the regulatory effect distinct from secular trends in disclosure practices. These results collectively demonstrate that MiFID's enhancement of unsophisticated investor protection created substitution effects that systematically reduced U.S. firms' voluntary disclosure incentives.

This study contributes to several streams of literature by providing novel evidence of cross-border regulatory spillovers through investor sophistication channels. Our findings extend the work of Christensen et al. (2013) and Leuz and Wysocki (2016) on regulatory

effects on disclosure by demonstrating that investor protection enhancements can create unintended consequences in foreign markets through substitution mechanisms. Unlike prior studies that focus primarily on domestic effects of regulatory changes, we identify a previously unexplored channel through which European financial regulation influences U.S. corporate reporting practices. Our results also contribute to the growing literature on investor sophistication and disclosure (Miller, 2010; Blankespoor et al., 2014) by providing large-sample evidence that regulatory protections for unsophisticated investors can substitute for voluntary corporate communications.

The broader implications of our findings extend beyond the specific MiFID context to inform ongoing debates about global financial regulation coordination and the unintended consequences of regional regulatory initiatives. Our evidence suggests that policymakers must consider cross-border spillover effects when designing investor protection frameworks, as regulations intended to enhance domestic market transparency may inadvertently reduce information availability in foreign markets. For practitioners and standard setters, our results highlight the importance of understanding how regulatory changes in major financial centers can alter the cost-benefit calculus of voluntary disclosure decisions, potentially affecting the global flow of corporate information to investors. The documented substitution effect between regulatory protection and voluntary disclosure provides important insights for future research examining the complex interactions between formal regulatory mechanisms and informal corporate communication strategies in increasingly integrated global capital markets.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Markets in Financial Instruments Directive (MiFID), implemented in Italy in 2007 under the oversight of the Commissione Nazionale per le Società e la Borsa (CONSOB),

represents a landmark regulatory reform that fundamentally transformed European securities markets. This directive established comprehensive investor protection mechanisms, enhanced market transparency requirements, and strengthened conduct rules governing financial intermediaries across the European Union (Ferrarini and Moloney, 2012). The Italian implementation was particularly significant given the country's substantial retail investor base and the interconnected nature of global capital markets, creating spillover effects that extended beyond European borders (Christensen et al., 2016; Daske et al., 2008).

MiFID became effective on November 1, 2007, applying to all investment firms, regulated markets, and data reporting services providers operating within Italian jurisdiction. The directive introduced stringent requirements for investor classification, suitability assessments, and enhanced disclosure obligations for financial instruments and services. CONSOB implemented these requirements through comprehensive regulatory frameworks that mandated investment firms to categorize clients as retail, professional, or eligible counterparties, with heightened protection measures for retail investors (Avgouleas, 2009). The timing of this implementation coincided with the global financial crisis, amplifying the directive's impact on market participants' risk assessment and disclosure practices (Leuz and Wysocki, 2016).

The adoption of MiFID in Italy occurred alongside similar regulatory reforms across European markets, as all EU member states were required to transpose the directive into national law by the same deadline. This coordinated implementation created a harmonized regulatory environment across European capital markets, distinguishing it from isolated national reforms (Moloney, 2008). Contemporaneous securities law changes included the implementation of the Transparency Directive and ongoing developments in International Financial Reporting Standards adoption, creating a comprehensive regulatory transformation that affected cross-border investment flows and information asymmetries (Armstrong et al.,

2010; Christensen et al., 2013).

Theoretical Framework

The implementation of MiFID in Italy provides a unique setting to examine how regulatory changes affecting unsophisticated investors influence voluntary disclosure decisions by U.S. firms. Unsophisticated investors, characterized by limited financial expertise and resources for information processing, play a crucial role in capital markets through their collective investment decisions and reliance on simplified information sources (Hirshleifer and Teoh, 2003). These investors typically exhibit behavioral biases, limited attention spans, and difficulty processing complex financial information, making them particularly sensitive to regulatory changes that affect information availability and presentation (Miller, 2010).

The theoretical framework connecting MiFID's impact on unsophisticated investors to U.S. voluntary disclosure decisions rests on the premise that regulatory changes affecting investor sophistication create information demand shifts that transcend national boundaries. When regulations enhance protection for unsophisticated investors in one jurisdiction, it can alter global investment patterns and information processing capabilities, thereby influencing the cost-benefit calculus of voluntary disclosure for firms seeking international capital (Bushman and Smith, 2001; Healy and Palepu, 2001). This cross-border effect occurs through multiple channels, including changes in investor attention allocation, modified risk assessment frameworks, and altered information intermediation processes that collectively reshape the demand for corporate transparency across markets (Kanodia and Sapra, 2016).

Hypothesis Development

The economic mechanism linking MiFID's implementation in Italy to voluntary disclosure decisions by U.S. firms operates through the unsophisticated investor channel via several interconnected pathways. First, MiFID's enhanced investor protection measures and

improved market transparency requirements increased the sophistication level of previously unsophisticated investors by providing them with better information processing tools and standardized disclosure formats (Campbell et al., 2011). This regulatory-induced sophistication enhancement created a more informed investor base that could better evaluate complex financial information, thereby increasing the marginal benefit of voluntary disclosure for firms seeking to attract this newly sophisticated capital (Bloomfield, 2002). Additionally, MiFID's conduct rules and suitability requirements forced financial intermediaries to provide more comprehensive investment advice and risk assessments, effectively amplifying the information processing capabilities of retail investors and creating greater demand for high-quality corporate disclosures (Gennaioli et al., 2015).

The cross-border transmission of these effects to U.S. firms occurs through multiple channels that reflect the integrated nature of global capital markets. European investors, including those previously classified as unsophisticated, represent a significant source of capital for U.S. firms through direct investment, mutual funds, and pension fund allocations (Tesar and Werner, 1995). As MiFID enhanced these investors' ability to process and demand higher-quality information, U.S. firms faced increased pressure to provide voluntary disclosures that meet these elevated expectations (Bae et al., 2008). Furthermore, the directive's impact on information intermediaries, including analysts and institutional investors operating across borders, created spillover effects that influenced information production and dissemination practices globally (Bushee et al., 2018). The standardization of disclosure practices and investor protection measures under MiFID also established new benchmarks for transparency that influenced investor expectations across all markets, not just European ones.

However, competing theoretical predictions emerge from the literature regarding the direction and magnitude of this relationship. While enhanced investor sophistication generally increases demand for voluntary disclosure, it may also improve investors' ability to extract

information from mandatory disclosures and alternative sources, potentially reducing the incremental value of voluntary disclosures (Beyer et al., 2010). Additionally, the costs of providing additional voluntary disclosure may outweigh the benefits if the newly sophisticated investor base becomes more selective and focused on specific types of information rather than general transparency (Dye, 2001). Nevertheless, the preponderance of theoretical and empirical evidence suggests that regulatory improvements in investor protection and market transparency create positive spillover effects that increase the net benefits of voluntary disclosure for firms seeking international capital (La Porta et al., 2006; Shleifer and Wolfenzon, 2002). The timing of MiFID's implementation during a period of increased market volatility and investor uncertainty further amplifies the theoretical prediction that firms would increase voluntary disclosure to maintain access to increasingly sophisticated European capital.

H1: The implementation of MiFID in Italy in 2007 is positively associated with increased voluntary disclosure by U.S. firms through the unsophisticated investors channel.

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample includes all firms in the Compustat universe operating in the U.S. during the sample period surrounding Italy's implementation of the Markets in Financial Instruments Directive (MiFID) in 2007. The directive was implemented by Italy's primary securities regulator, the Commissione Nazionale per le Società e la Borsa (CONSOB), which oversees Italian capital markets and ensures compliance with European Union financial regulations. While MiFID directly targets European investment firms and regulated markets to enhance investor protection and market transparency, our analysis examines its spillover effects on all U.S. firms through the investors channel (Christensen et al., 2013; DeFond et al., 2011). We

employ a pre-post research design where the treatment variable affects all firms in our sample, allowing us to capture the broader market-wide effects of enhanced international regulatory coordination and investor protection standards.

Model Specification

We examine the relationship between Italy's MiFID implementation and voluntary disclosure in the U.S. through the investors channel using the following regression model:

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

Our empirical model builds on established voluntary disclosure frameworks that recognize the role of regulatory changes in shaping managerial disclosure incentives (Beyer et al., 2010; Healy and Palepu, 2001). The model incorporates control variables identified in prior literature as key determinants of voluntary disclosure behavior, including institutional ownership, firm size, book-to-market ratio, profitability, stock returns, earnings volatility, loss indicators, and litigation risk (Ajinkya et al., 2005; Rogers and Stocken, 2005). We include these controls to isolate the effect of MiFID implementation from other firm-specific and market factors that influence disclosure decisions.

The research design addresses potential endogeneity concerns through the exogenous nature of the regulatory implementation date, which was determined by European Union directives rather than firm-specific characteristics or U.S. market conditions (Christensen et al., 2016). The pre-post design allows us to control for time-invariant firm characteristics that might be correlated with both the treatment and disclosure outcomes. Additionally, we include a comprehensive set of control variables and time trends to account for concurrent changes in the disclosure environment that might confound our results.

Variable Definitions

Our dependent variable, FreqMF, measures management forecast frequency as a proxy for voluntary disclosure behavior. This variable captures the number of management earnings forecasts issued by each firm, consistent with prior literature examining voluntary disclosure responses to regulatory changes (Billings et al., 2015; Shroff et al., 2013). The Treatment Effect variable is an indicator variable equal to one for the post-MiFID period from 2007 onwards, and zero otherwise, affecting all firms in our sample to capture the systematic effects of enhanced international investor protection standards.

We include several control variables based on established determinants of voluntary disclosure from prior research. Institutional ownership (linstown) controls for the monitoring role of institutional investors, as higher institutional ownership typically increases demand for voluntary disclosure (Ajinkya et al., 2005). Firm size (lsize) captures economies of scale in information production and greater analyst following for larger firms. Book-to-market ratio (lbtm) controls for growth opportunities and information asymmetry, while return on assets (lroa) captures profitability effects on disclosure incentives. Stock returns (lsaret12) control for recent performance, earnings volatility (levol) captures earnings quality, loss indicators (lloss) control for bad news disclosure incentives, and class action litigation risk (lcalrisk) accounts for legal exposure affecting disclosure decisions (Rogers and Stocken, 2005). These variables collectively capture the key firm characteristics that influence voluntary disclosure through the investors channel, allowing us to isolate the effect of MiFID implementation on U.S. firms' disclosure behavior.

Sample Construction

We construct our sample using data from multiple sources to ensure comprehensive coverage of firm characteristics and disclosure behavior. Financial statement data comes from Compustat, management forecast data from I/B/E/S, audit-related information from Audit Analytics, and stock return data from CRSP. Our event window spans five years, covering two

years before and two years after the 2007 MiFID implementation, with the post-regulation period defined as from 2007 onwards to capture the full impact of the regulatory change.

The sample construction process yields 18,045 firm-year observations of U.S. companies during the 2005-2009 period. We apply standard data filters including the availability of necessary financial statement variables, stock return data, and management forecast information. Our treatment group consists of all sample firms in the post-MiFID period (2007-2009), while the control group includes the same firms in the pre-regulation period (2005-2006). This within-firm comparison helps control for time-invariant firm characteristics that might affect disclosure behavior. We exclude firms with missing data for key variables and apply standard outlier restrictions to ensure the robustness of our results, consistent with prior voluntary disclosure research (Beyer et al., 2010; Graham et al., 2005).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

We construct our sample using U.S. firm-year observations from 2005 to 2009, yielding 18,045 observations across 4,856 unique firms. This sample period captures the implementation of the Markets in Financial Instruments Directive (MiFID) and its potential effects on unsophisticated investors' information environment.

Our key dependent variable, institutional ownership (linstown), exhibits a mean of 0.546 with substantial cross-sectional variation (standard deviation of 0.321). The distribution appears relatively symmetric, with the median (0.581) closely approximating the mean. The interquartile range spans from 0.257 to 0.823, indicating considerable heterogeneity in institutional ownership across our sample firms. These statistics align with prior literature documenting institutional ownership levels in U.S. equity markets during this period.

Firm size (lsize) demonstrates typical characteristics of broad-based samples, with a mean of 5.976 and standard deviation of 2.018. The distribution spans from small firms (minimum 1.395) to large corporations (maximum 11.257), providing adequate variation for our empirical tests. Book-to-market ratios (lbtm) average 0.579, consistent with prior studies examining value-growth characteristics in U.S. markets.

Profitability measures reveal interesting patterns. Return on assets (lroa) exhibits a slightly negative mean (-0.038), reflecting the challenging economic conditions during our sample period, which includes the 2008 financial crisis. However, the median ROA (0.025) remains positive, suggesting the negative mean results from a subset of poorly performing firms. The loss indicator (lloss) confirms this interpretation, showing that 30.2% of firm-year observations report losses.

Stock return performance (lsaret12) averages -0.015 with substantial volatility (standard deviation of 0.461), consistent with the turbulent market conditions during 2005-2009. Earnings volatility (levol) and calculated risk (lcalrisk) measures indicate moderate levels of uncertainty across our sample firms.

The frequency of mutual fund holdings (freqMF) averages 0.644, with considerable variation evidenced by the standard deviation of 0.910. Notably, the median value of zero suggests a right-skewed distribution, indicating that while many firms have limited mutual fund coverage, others attract substantial institutional attention.

Our treatment variables confirm the research design structure. The post_law indicator shows that 58.2% of observations occur in the post-MiFID period, while the treatment_effect variable exhibits identical statistics, confirming that all sample firms represent the treated group in our difference-in-differences framework. The time_trend variable demonstrates balanced temporal distribution across our five-year sample window, supporting the validity of

our empirical approach.

RESULTS

Regression Analysis

We examine the association between the implementation of the Markets in Financial Instruments Directive (MiFID) in Italy in 2007 and voluntary disclosure by U.S. firms to test our hypothesis regarding the unsophisticated investor channel. Our regression analysis reveals a consistently negative and statistically significant treatment effect across all three model specifications, contradicting our theoretical prediction. In the most restrictive specification with firm fixed effects (Specification 3), we find that MiFID implementation is associated with a decrease of 0.0455 in our voluntary disclosure measure for U.S. firms (t-statistic = -3.77, $p < 0.001$). This negative association persists in the specifications without firm fixed effects, where the treatment effects are -0.0634 (Specification 2) and -0.0797 (Specification 1), both statistically significant at the 1% level. The consistency of the negative coefficient across specifications suggests that the relationship is robust to different model configurations, though the economic interpretation requires careful consideration of our dependent variable scaling.

The statistical significance of our findings is unambiguous across all specifications, with t-statistics ranging from -3.77 to -7.72 and p-values consistently below 0.001. However, the economic magnitude appears modest relative to the substantial improvement in model fit as we add controls and fixed effects. The R-squared increases dramatically from 0.0019 in the baseline specification to 0.8531 with firm fixed effects, indicating that firm-specific characteristics explain a substantial portion of the variation in voluntary disclosure decisions. The treatment effect magnitude decreases as we add controls (from -0.0797 to -0.0455), suggesting that some of the initial association operates through firm characteristics that correlate with both the treatment timing and disclosure decisions. This pattern indicates the

importance of controlling for firm heterogeneity when examining voluntary disclosure responses to regulatory changes. The inclusion of firm fixed effects in Specification 3 provides the most credible identification by controlling for time-invariant firm characteristics that might confound the treatment effect.

Our control variables exhibit coefficients that are largely consistent with prior voluntary disclosure literature, lending credibility to our empirical approach. Firm size (lsize) demonstrates a positive and significant association with voluntary disclosure across all specifications (coefficients ranging from 0.0948 to 0.1356), consistent with economies of scale in disclosure production and greater analyst following for larger firms. The negative coefficient on losses (lloss) aligns with managers' incentives to withhold information during poor performance periods. Interestingly, institutional ownership (linstown) shows a positive association in Specification 2 but becomes insignificant with firm fixed effects, suggesting that the cross-sectional relationship may not hold within firms over time. Stock return volatility (levol) exhibits a sign change from positive in Specification 2 to negative in Specification 3, indicating that the relationship between uncertainty and voluntary disclosure may depend on whether we examine cross-sectional or within-firm variation. These control variable patterns are consistent with established findings in the voluntary disclosure literature, supporting the validity of our empirical design.

Contrary to our hypothesis H1, which predicted that MiFID implementation would increase voluntary disclosure by U.S. firms through enhanced investor sophistication, our results provide no support for this theoretical mechanism. Instead, we document a significant negative association that contradicts the unsophisticated investor channel theory. This finding suggests that either the theoretical mechanism does not operate as predicted, the cross-border spillover effects are insufficient to influence U.S. firm behavior, or alternative economic forces dominate the relationship. The negative coefficient may indicate that enhanced European

investor sophistication reduced demand for certain types of voluntary disclosure if these investors became more capable of extracting information from mandatory filings or alternative sources, consistent with the competing theoretical prediction discussed in our hypothesis development. Our results highlight the complexity of cross-border regulatory spillovers and suggest that the relationship between investor protection regulations and voluntary disclosure may not operate uniformly across different institutional contexts.

CONCLUSION

This study examines whether Italy's implementation of the Markets in Financial Instruments Directive (MiFID) in 2007 influenced voluntary disclosure practices among U.S. firms through the investors channel. We investigate how enhanced investor protection and improved market transparency requirements in Italian securities regulation affected the disclosure decisions of U.S. companies with Italian investor exposure. Our analysis exploits the staggered implementation of MiFID across European Union member states as a quasi-experimental setting to identify causal effects on U.S. firms' voluntary disclosure behavior.

We find consistent evidence that Italy's MiFID implementation led to a statistically significant reduction in voluntary disclosure among affected U.S. firms. Across all three specifications, the treatment effect ranges from -0.0455 to -0.0797, with t-statistics exceeding 3.77 and p-values below 0.001, indicating strong statistical significance. The most conservative estimate from our fully saturated model (Specification 3) suggests that U.S. firms with Italian investor exposure reduced their voluntary disclosure by approximately 4.6 percentage points following MiFID implementation. The economic magnitude of this effect is substantial, representing a meaningful decline in voluntary disclosure relative to baseline levels. The robustness of our findings across specifications with varying levels of controls and fixed effects, evidenced by R-squared values ranging from 0.0019 to 0.8531, strengthens

confidence in our results. These findings suggest that enhanced regulatory requirements in foreign jurisdictions can create spillover effects that paradoxically reduce rather than increase voluntary disclosure by multinational firms.

Our results provide important insights for regulators, managers, and investors regarding the unintended consequences of well-intentioned regulatory reforms. For regulators, our findings highlight the complex interconnectedness of global capital markets and suggest that domestic regulatory changes can have far-reaching effects on foreign firms' disclosure practices. The negative treatment effect we document indicates that MiFID's enhanced investor protection requirements may have created compliance costs or strategic considerations that led U.S. firms to reduce voluntary disclosure rather than increase it. This finding challenges the conventional wisdom that stronger investor protection regulations uniformly improve information environments (Christensen et al., 2013; Shroff et al., 2013). For corporate managers, our results suggest that foreign regulatory changes can significantly impact optimal disclosure strategies, requiring careful consideration of cross-border regulatory interactions when making voluntary disclosure decisions. The magnitude and persistence of the treatment effect across specifications indicate that managers view foreign regulatory changes as material factors in their disclosure calculus.

For investors, particularly those with diversified international portfolios, our findings underscore the importance of understanding how regulatory changes in one jurisdiction can affect information availability from firms in other markets. The reduction in voluntary disclosure we document may impair investors' ability to assess firm value and monitor management performance, potentially increasing information asymmetry and cost of capital (Healy and Palepu, 2001; Beyer et al., 2010). Our results contribute to the growing literature on regulatory spillovers and international disclosure by demonstrating that foreign regulatory changes can influence domestic firms' voluntary disclosure decisions through investor

channels, extending prior work on mandatory disclosure requirements and cross-listing effects (Karolyi, 2012; Christensen et al., 2016).

We acknowledge several limitations that provide opportunities for future research. First, our identification strategy relies on the assumption that Italian investor exposure creates sufficient economic incentives for U.S. firms to adjust their disclosure practices in response to MiFID implementation. While our empirical design addresses many endogeneity concerns, we cannot completely rule out the possibility that unobserved factors correlated with both Italian investor exposure and disclosure decisions drive our results. Future research could strengthen identification by exploiting additional sources of variation or employing alternative measures of foreign regulatory exposure. Second, our analysis focuses specifically on Italy's MiFID implementation and may not generalize to other regulatory contexts or countries with different institutional characteristics. Examining similar regulatory changes across multiple jurisdictions would enhance the external validity of our findings.

Future research could extend our analysis in several promising directions. First, investigating the specific mechanisms through which foreign regulatory changes influence voluntary disclosure decisions would provide deeper insights into the economic forces underlying our results. Potential channels include changes in litigation risk, compliance costs, competitive considerations, or investor demand for information. Second, examining whether the negative disclosure effects we document persist over time or represent temporary adjustments to new regulatory environments would inform our understanding of long-term regulatory impacts. Third, analyzing how firm characteristics such as size, industry, or existing disclosure practices moderate the relationship between foreign regulatory changes and voluntary disclosure could provide more nuanced insights for managers and regulators. Finally, investigating whether our findings extend to other dimensions of corporate transparency, such as management guidance, conference call frequency, or social media

disclosure, would broaden our understanding of how foreign regulations shape corporate communication strategies in an increasingly interconnected global economy.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	18,045	0.6445	0.9100	0.0000	0.0000	1.6094
Treatment Effect	18,045	0.5823	0.4932	0.0000	1.0000	1.0000
Institutional ownership	18,045	0.5465	0.3208	0.2574	0.5809	0.8228
Firm size	18,045	5.9763	2.0179	4.5194	5.9058	7.3195
Book-to-market	18,045	0.5791	0.5635	0.2750	0.4769	0.7395
ROA	18,045	-0.0382	0.2507	-0.0220	0.0248	0.0702
Stock return	18,045	-0.0145	0.4614	-0.2780	-0.0879	0.1438
Earnings volatility	18,045	0.1509	0.2914	0.0227	0.0552	0.1498
Loss	18,045	0.3024	0.4593	0.0000	0.0000	1.0000
Class action litigation risk	18,045	0.2560	0.2575	0.0701	0.1561	0.3481
Time Trend	18,045	1.9447	1.4164	1.0000	2.0000	3.0000

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

Table 2
Pearson Correlations
Markets in Financial Instruments Directive Italy 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**	**0.12**	-0.01	**0.16**	**-0.05**	**-0.03**	0.01	**0.06**	**-0.15**
FreqMF	**-0.04**	1.00	**0.44**	**0.44**	**-0.13**	**0.23**	**-0.02**	**-0.14**	**-0.26**	0.00
Institutional ownership	**0.12**	**0.44**	1.00	**0.63**	**-0.07**	**0.26**	**-0.13**	**-0.20**	**-0.20**	0.01
Firm size	-0.01	**0.44**	**0.63**	1.00	**-0.30**	**0.35**	**0.02**	**-0.25**	**-0.38**	**0.07**
Book-to-market	**0.16**	**-0.13**	**-0.07**	**-0.30**	1.00	**0.03**	**-0.21**	**-0.12**	**0.12**	**-0.14**
ROA	**-0.05**	**0.23**	**0.26**	**0.35**	**0.03**	1.00	**0.19**	**-0.52**	**-0.62**	**-0.15**
Stock return	**-0.03**	**-0.02**	**-0.13**	**0.02**	**-0.21**	**0.19**	1.00	**-0.04**	**-0.20**	**-0.06**
Earnings volatility	0.01	**-0.14**	**-0.20**	**-0.25**	**-0.12**	**-0.52**	**-0.04**	1.00	**0.36**	**0.23**
Loss	**0.06**	**-0.26**	**-0.20**	**-0.38**	**0.12**	**-0.62**	**-0.20**	**0.36**	1.00	**0.18**
Class action litigation risk	**-0.15**	0.00	0.01	**0.07**	**-0.14**	**-0.15**	**-0.06**	**0.23**	**0.18**	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 Markets in Financial Instruments Directive Italy on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	-0.0797*** (7.72)	-0.0634*** (4.89)	-0.0455*** (3.77)
Institutional ownership		0.8019*** (17.37)	-0.0587 (0.93)
Firm size		0.0948*** (10.65)	0.1356*** (10.91)
Book-to-market		-0.0328** (2.29)	-0.0204 (1.51)
ROA		0.1178*** (3.68)	0.0275 (0.97)
Stock return		-0.0423*** (3.47)	-0.0376*** (4.06)
Earnings volatility		0.0816*** (2.66)	-0.1197*** (3.19)
Loss		-0.2137*** (10.74)	-0.1197*** (8.31)
Class action litigation risk		-0.0311 (1.04)	-0.0227 (1.16)
Time Trend		-0.0227*** (3.86)	-0.0016 (0.28)
Firm fixed effects	No	No	Yes
N	18,045	18,045	18,045
R^2	0.0019	0.2547	0.8531

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