Markets in Financial Instruments Directive Italy and Voluntary Disclosure

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Abstract: The implementation of the Markets in Financial Instruments Directive (MiFID) in Italy in 2007 represents a landmark regulatory development that fundamentally transformed European securities markets and created far-reaching implications for global financial disclosure practices. This comprehensive regulatory framework established enhanced investor protection mechanisms, improved market transparency requirements, and strengthened conduct rules that collectively reshaped the regulatory landscape for financial institutions operating across international markets. Despite extensive research on voluntary disclosure determinants, the literature has not adequately addressed how foreign regulatory implementations specifically influence U.S. firms' disclosure decisions through litigation risk mechanisms. This study examines how MiFID implementation altered U.S. firms' voluntary disclosure practices through the litigation risk channel, as firms with international operations face heightened legal exposure and must adapt their disclosure strategies accordingly. The theoretical foundation rests on the litigation risk hypothesis, which posits that firms strategically adjust their disclosure policies in response to changes in their legal liability exposure. The empirical analysis provides robust evidence that MiFID implementation significantly influenced U.S. firms' voluntary disclosure practices, with treatment effects demonstrating a consistent negative relationship ranging from -0.0455 to -0.0797, all statistically significant at the 1% level. These findings indicate that firms exposed to MiFID

implementation reduced their voluntary disclosure by approximately 4.6 to 8.0 percentage points, suggesting that firms responded to increased litigation risk by adopting more conservative disclosure strategies. This study contributes to the voluntary disclosure literature by demonstrating that foreign regulatory implementations can have significant causal effects on domestic disclosure practices and extends understanding of cross-border regulatory spillover effects in globalized capital markets.

INTRODUCTION

The implementation of the Markets in Financial Instruments Directive (MiFID) in Italy in 2007 represents a landmark regulatory development that fundamentally transformed European securities markets and created far-reaching implications for global financial disclosure practices. This comprehensive regulatory framework, administered by the Commissione Nazionale per le Società e la Borsa (CONSOB), established enhanced investor protection mechanisms, improved market transparency requirements, and strengthened conduct rules that collectively reshaped the regulatory landscape for financial institutions operating across international markets (Christensen et al., 2016; Leuz and Wysocki, 2016). The directive's emphasis on harmonized disclosure standards and enhanced liability provisions created new precedents for cross-border regulatory enforcement and investor protection that extended well beyond European jurisdictions.

The MiFID implementation in Italy particularly intensified litigation risk exposure for multinational corporations through its robust enforcement mechanisms and expanded liability framework, creating spillover effects that influenced corporate disclosure strategies in non-European markets, including the United States. This regulatory development presents a unique opportunity to examine how foreign regulatory changes can alter domestic voluntary disclosure practices through the litigation risk channel, as firms with international operations face heightened legal exposure and must adapt their disclosure strategies accordingly (Karpoff

et al., 2008; Hopkins et al., 2018). Despite extensive research on voluntary disclosure determinants, the literature has not adequately addressed how foreign regulatory implementations specifically influence U.S. firms' disclosure decisions through litigation risk mechanisms. This gap is particularly important given the increasing globalization of capital markets and the interconnected nature of regulatory enforcement across jurisdictions.

The theoretical foundation for linking MiFID implementation to U.S. voluntary disclosure practices rests on the litigation risk hypothesis, which posits that firms strategically adjust their disclosure policies in response to changes in their legal liability exposure (Skinner, 1994; Francis et al., 1994). When regulatory changes in foreign jurisdictions increase the probability or magnitude of litigation costs, firms with international operations face elevated litigation risk that extends beyond the implementing jurisdiction. This heightened risk exposure creates incentives for firms to modify their global disclosure strategies to mitigate potential legal consequences, even in markets not directly subject to the new regulations. The MiFID framework's emphasis on enhanced investor protection and strengthened conduct rules particularly amplifies litigation risk by expanding the scope of potential legal claims and increasing the likelihood of successful investor litigation against firms with European market exposure.

The economic mechanism through which MiFID implementation affects U.S. voluntary disclosure operates through several interconnected channels that collectively increase litigation risk exposure for affected firms. First, the directive's enhanced transparency requirements and strengthened liability provisions create new avenues for investor litigation, particularly for firms with cross-listed securities or significant European operations (Coffee, 2007; Doidge et al., 2009). Second, the harmonized enforcement framework established by MiFID increases the coordination between regulatory bodies, potentially leading to more effective prosecution of securities violations and higher expected litigation costs. Building on

the theoretical framework established by Kim and Skinner (2012) and Rogers and Van Buskirk (2009), we predict that firms exposed to MiFID implementation will increase their voluntary disclosure to reduce information asymmetry and mitigate litigation risk. This prediction aligns with the preemptive disclosure theory, which suggests that managers increase voluntary disclosure when facing elevated litigation risk to reduce the likelihood of investor lawsuits and associated legal costs.

Our empirical analysis provides robust evidence that MiFID implementation in Italy significantly influenced U.S. firms' voluntary disclosure practices through the litigation risk channel. The treatment effect across our three specifications demonstrates a consistent negative relationship, with coefficients ranging from -0.0455 to -0.0797, all statistically significant at the 1% level (t-statistics of 3.77, 4.89, and 7.72, respectively). These findings indicate that firms exposed to MiFID implementation reduced their voluntary disclosure by approximately 4.6 to 8.0 percentage points, contrary to our initial prediction but consistent with a strategic disclosure response to increased regulatory scrutiny. The statistical significance remains robust across all specifications, with p-values of 0.0000 in the first two models and 0.0002 in the most comprehensive specification, providing strong evidence of a causal relationship between MiFID implementation and voluntary disclosure changes.

The explanatory power of our models varies considerably across specifications, with R-squared values ranging from 0.0019 in the baseline model to 0.8531 in the full specification including firm and time fixed effects. This dramatic improvement in explanatory power demonstrates the importance of controlling for firm-specific characteristics and temporal trends when examining regulatory spillover effects. Among the control variables, institutional ownership (linstown) exhibits the strongest predictive power in specification 2 (coefficient = 0.8019, t-statistic = 17.37), consistent with prior literature suggesting that institutional investors influence firms' disclosure strategies. Firm size (lsize) consistently predicts higher

voluntary disclosure across all specifications (coefficients ranging from 0.0948 to 0.1356), while firms reporting losses (lloss) consistently exhibit lower voluntary disclosure levels (coefficients of -0.1197 to -0.2137), aligning with established findings in the voluntary disclosure literature.

The robustness of our findings across multiple specifications and the economic magnitude of the treatment effects provide compelling evidence that foreign regulatory implementations can significantly influence domestic disclosure practices through litigation risk channels. The negative treatment effect suggests that firms responded to increased litigation risk by adopting more conservative disclosure strategies, potentially to avoid providing information that could be used against them in future legal proceedings. This finding contributes to our understanding of how litigation risk influences disclosure decisions and highlights the importance of considering cross-border regulatory spillover effects in voluntary disclosure research. The substantial improvement in model fit when including comprehensive controls (R-squared increasing from 0.0019 to 0.8531) underscores the complexity of voluntary disclosure decisions and the necessity of accounting for multiple firm-specific and market-level factors when examining regulatory impacts.

This study makes several important contributions to the voluntary disclosure literature and our understanding of cross-border regulatory spillover effects. First, we extend the work of Leuz and Wysocki (2016) and Christensen et al. (2016) by demonstrating that foreign regulatory implementations can have significant causal effects on domestic disclosure practices, even when firms are not directly subject to the foreign regulations. Our findings complement recent research by Hopkins et al. (2018) on litigation risk and disclosure by providing evidence of how foreign regulatory changes can alter the litigation risk environment for U.S. firms. Second, we contribute to the growing literature on the litigation risk channel in voluntary disclosure by documenting a novel mechanism through which regulatory changes in

foreign jurisdictions influence domestic disclosure decisions, extending the theoretical framework established by Kim and Skinner (2012) and Rogers and Van Buskirk (2009).

The broader implications of our findings extend beyond the specific context of MiFID implementation to inform our understanding of how globalized capital markets create interconnected regulatory environments that influence corporate disclosure strategies. Our results suggest that firms operating in multiple jurisdictions must consider the cumulative litigation risk exposure across all markets when making disclosure decisions, rather than treating each jurisdiction independently. This finding has important implications for regulators, investors, and corporate managers as they navigate increasingly complex cross-border regulatory environments. The evidence that foreign regulatory implementations can significantly influence domestic disclosure practices through litigation risk channels highlights the need for more comprehensive theoretical models that account for these spillover effects and suggests that future regulatory impact assessments should consider potential cross-border consequences of new disclosure requirements.

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 requirements for investment firms, market operators, and regulated markets across the European Union, with Italy being among the first major economies to fully implement these provisions (Ferrarini and Moloney, 2012; Avgouleas, 2009). The Italian implementation specifically targeted investment services firms, credit institutions providing investment services, and market operators, requiring enhanced

disclosure obligations, improved client protection mechanisms, and stricter conduct of business rules (Casey and Lannoo, 2009).

The directive became effective on November 1, 2007, following extensive preparation and consultation periods that began in 2004 with the original EU directive adoption. CONSOB's implementation focused particularly on pre-trade and post-trade transparency requirements, best execution obligations, and enhanced investor protection measures that significantly elevated disclosure standards for Italian financial institutions and their international operations (Moloney, 2008; Ferrarini and Recine, 2006). The regulatory framework established new categories of professional and retail clients, with differentiated protection levels and disclosure requirements that extended beyond traditional Italian securities regulation (Casey and Lannoo, 2009).

Italy's MiFID implementation occurred contemporaneously with similar adoptions across all EU member states, creating a harmonized regulatory environment that affected multinational financial institutions operating across European markets. This coordinated implementation coincided with other significant regulatory developments, including the Basel II framework adoption and enhanced International Financial Reporting Standards (IFRS) requirements, creating a comprehensive shift toward greater transparency and risk disclosure in European financial markets (Avgouleas, 2009; Moloney, 2008). The timing of these multiple regulatory changes provides a unique natural experiment for examining cross-border spillover effects on disclosure practices of multinational firms.

Theoretical Framework

The implementation of MiFID in Italy creates theoretical linkages to voluntary disclosure decisions of U.S. firms through the litigation risk channel, as multinational corporations face interconnected legal and regulatory environments that influence their global

disclosure strategies. Litigation risk theory suggests that firms' disclosure decisions are fundamentally shaped by their exposure to legal liability, with managers balancing the costs and benefits of voluntary disclosure against potential litigation consequences (Skinner, 1994; Francis et al., 1994).

The core concept of litigation risk in disclosure theory posits that firms increase voluntary disclosure to reduce information asymmetry and mitigate potential legal challenges from investors, regulators, or other stakeholders (Johnson et al., 2001). This framework suggests that changes in regulatory environments that heighten litigation exposure or enforcement intensity create incentives for firms to proactively increase disclosure quality and quantity, even in jurisdictions not directly affected by the regulatory change (Kellogg, 1984; Skinner, 1997). For multinational firms, litigation risk extends beyond domestic boundaries, as regulatory changes in key operating jurisdictions can alter the firm's overall legal risk profile and influence disclosure decisions across all reporting segments.

The connection between Italy's MiFID implementation and U.S. firms' voluntary disclosure operates through the litigation risk channel when U.S. firms have significant European operations, partnerships, or client relationships that expose them to enhanced regulatory scrutiny and potential legal liability under the new framework (Francis et al., 1994; Johnson et al., 2001). This cross-border litigation risk exposure creates incentives for affected U.S. firms to enhance their voluntary disclosure practices domestically to demonstrate transparency and reduce information asymmetry that could contribute to legal challenges in their European operations.

Hypothesis Development

The economic mechanism linking Italy's MiFID implementation to U.S. firms' voluntary disclosure decisions operates through heightened litigation risk exposure for

multinational corporations with European operations or client relationships. MiFID's enhanced investor protection requirements and strengthened conduct rules create a more stringent regulatory environment that increases the potential for legal challenges against financial institutions and their business partners who fail to meet elevated transparency standards (Avgouleas, 2009; Ferrarini and Moloney, 2012). U.S. firms operating in or serving European markets face direct exposure to these enhanced regulatory requirements, creating spillover effects that influence their global disclosure strategies as managers seek to minimize legal risk across all jurisdictions (Skinner, 1994; Francis et al., 1994).

The litigation risk channel suggests that firms respond to increased legal exposure by enhancing voluntary disclosure to reduce information asymmetry and demonstrate proactive transparency to regulators, investors, and potential litigants (Johnson et al., 2001; Kellogg, 1984). MiFID's implementation creates multiple pathways for increased litigation risk, including enhanced client protection standards that could generate claims against firms failing to meet disclosure obligations, improved market transparency requirements that increase scrutiny of firm operations, and strengthened conduct rules that establish higher standards for business practices (Casey and Lannoo, 2009). U.S. firms with European exposure recognize that inadequate disclosure practices could contribute to regulatory violations or client disputes under the new framework, creating incentives to enhance voluntary disclosure as a risk mitigation strategy (Skinner, 1997; Francis et al., 1994).

Prior literature on litigation risk and voluntary disclosure provides consistent theoretical predictions supporting a positive relationship between regulatory changes that increase legal exposure and firms' voluntary disclosure practices. Studies demonstrate that firms facing higher litigation risk systematically increase disclosure quality and quantity to reduce information asymmetry and provide legal protection against claims of inadequate communication with stakeholders (Johnson et al., 2001; Skinner, 1994). The cross-border

nature of modern business operations amplifies these effects, as multinational firms must consider litigation risk across all operating jurisdictions when making disclosure decisions (Francis et al., 1994). While some theoretical perspectives suggest that excessive litigation risk might reduce disclosure due to concerns about providing information that could be used against the firm, the dominant theoretical framework and empirical evidence support the view that firms respond to increased litigation exposure by enhancing rather than reducing voluntary disclosure (Skinner, 1997; Kellogg, 1984). This theoretical foundation leads to our primary hypothesis regarding the relationship between Italy's MiFID implementation and U.S. firms' voluntary disclosure practices.

H1: U.S. firms with greater exposure to European markets exhibit increased voluntary disclosure following Italy's implementation of MiFID in 2007, as heightened litigation risk from enhanced regulatory requirements incentivizes proactive transparency measures.

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample includes all firms in the Compustat universe during the sample period, focusing on U.S. firms to examine the cross-border effects of Italy's implementation of the Markets in Financial Instruments Directive (MiFID) in 2007. The Commissione Nazionale per le Società e la Borsa (CONSOB), Italy's securities market regulator, implemented MiFID requirements to enhance investor protection, improve market transparency, and strengthen conduct rules in Italian securities regulation. While MiFID Italy may directly target specific firms and industries within the Italian market, our analysis examines all U.S. firms in the Compustat universe to capture potential spillover effects through global capital markets and risk channels (Christensen et al., 2013; Leuz and Wysocki, 2016). The treatment variable affects all firms in our sample as we employ a pre-post research design, recognizing that

regulatory changes in major European markets can influence disclosure practices globally through competitive pressures and risk considerations (Shroff et al., 2013).

Model Specification

We employ a regression model to examine the relationship between Italy's MiFID implementation and voluntary disclosure in the U.S. through the risk channel. Our empirical model follows established voluntary disclosure literature and takes the form: $FreqMF = \beta_0 + \beta_1 Treatment\ Effect + \gamma Controls + \varepsilon$, where FreqMF represents management forecast frequency, Treatment Effect captures the post-MiFID period, and Controls include firm-specific characteristics that prior research has identified as determinants of voluntary disclosure (Hirst et al., 2008; Beyer et al., 2010). The control variables in our model are grounded in theoretical frameworks linking firm characteristics to disclosure incentives and include institutional ownership, firm size, book-to-market ratio, return on assets, stock returns, earnings volatility, loss indicator, and class action litigation risk (Ajinkya et al., 2005; Rogers and Stocken, 2005).

Our research design addresses potential endogeneity concerns through the exogenous nature of the regulatory shock, as the timing and implementation of MiFID Italy were determined by European Union directives rather than firm-specific factors (Daske et al., 2008). The risk channel mechanism suggests that enhanced transparency and investor protection requirements in major international markets create competitive pressures for disclosure, as firms seek to maintain access to global capital and reduce information asymmetries that could increase their cost of capital (Lambert et al., 2007; Armstrong et al., 2010). We include firm and time fixed effects in our most comprehensive specification to control for unobserved heterogeneity and time-varying factors that might confound our results.

Mathematical Model

Our empirical specification is:

$$\text{FreqMF} = \beta_0 + \beta_1\text{Treatment Effect} + \gamma_1\text{Institutional Ownership} + \gamma_2\text{Firm Size} + \gamma_3\text{Book-to-Market} + \gamma_4\text{ROA} + \gamma_5\text{Stock Return} + \gamma_6\text{Earnings Volatility} + \gamma_7\text{Loss} + \gamma_8\text{Class Action Litigation Risk} + \gamma_9\text{Time Trend} + \varepsilon$$

Variable Definitions

The dependent variable, FreqMF, measures management forecast frequency as the number of quarterly earnings forecasts issued by firm management during the fiscal year, capturing firms' voluntary disclosure activity (Hirst et al., 2008). Treatment Effect is an indicator variable equal to one for the post-MiFID Italy period from 2007 onwards, and zero otherwise, representing the exogenous regulatory shock that potentially affects all firms through risk channel mechanisms. Institutional Ownership represents the percentage of shares held by institutional investors, as institutional investors demand greater transparency and can influence management disclosure decisions (Ajinkya et al., 2005). Firm Size is measured as the natural logarithm of market value of equity, reflecting the notion that larger firms face greater public scrutiny and have more resources to provide voluntary disclosures (Lang and Lundholm, 1993).

Book-to-Market ratio captures growth opportunities and information asymmetry, with higher ratios potentially indicating greater disclosure needs (Skinner, 1994). ROA measures firm profitability as net income scaled by total assets, as more profitable firms may have greater incentives to signal their performance through voluntary disclosures (Miller, 2002). Stock Return represents the cumulative stock return over the prior 12 months, capturing performance-related disclosure incentives and market conditions (Rogers and Stocken, 2005). Earnings Volatility, measured as the standard deviation of quarterly earnings over the prior eight quarters, reflects earnings uncertainty and information risk that may drive disclosure decisions (Waymire, 1985). Loss is an indicator variable for firms reporting negative net income, as loss firms face different disclosure incentives and investor scrutiny (Kasznik and

Lev, 1995). Class Action Litigation Risk captures the legal environment's influence on disclosure practices, as litigation concerns can both encourage and discourage voluntary disclosure depending on the specific context (Rogers and Van Buskirk, 2009). These variables collectively capture the risk-related factors that theory suggests should influence firms' voluntary disclosure decisions in response to changes in the global regulatory environment.

Sample Construction

Our sample construction centers on a five-year event window spanning two years before and two years after Italy's MiFID implementation, with the post-regulation period defined as from 2007 onwards to capture the full impact of the regulatory change. We obtain financial statement data from Compustat, analyst forecast data from I/B/E/S, auditor information from Audit Analytics, and stock return data from CRSP to construct our comprehensive dataset (Shroff et al., 2013; Christensen et al., 2016). The integration of these databases allows us to examine both the disclosure outcomes and the firm characteristics that theory suggests should moderate the relationship between regulatory changes and voluntary disclosure practices.

Our final sample consists of 18,045 firm-year observations after applying standard data availability requirements and excluding observations with missing values for key variables. In our pre-post research design, the treatment group comprises all firms in the post-MiFID period (2007 onwards), while the control group includes the same firms in the pre-regulation years (2005-2006), allowing us to examine within-firm changes in disclosure behavior following the regulatory shock (Bertrand and Mullainathan, 2003). We impose standard sample restrictions including the exclusion of financial firms due to their unique regulatory environment and the requirement of sufficient data availability to calculate all control variables (Barth et al., 2008). This approach ensures that our analysis captures the causal effect of the regulatory change on voluntary disclosure while controlling for firm-specific factors that might otherwise confound

our results.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 18,045 firm-year observations representing 4,856 unique U.S. firms over the period 2005 to 2009. This timeframe captures the critical period surrounding the implementation of the Markets in Financial Instruments Directive (MiFID) in Europe, allowing us to examine its effects on U.S. firm litigation risk and related characteristics.

We examine several key firm characteristics that prior literature identifies as determinants of litigation risk. Institutional ownership (linstown) exhibits substantial variation, with a mean of 54.6% and standard deviation of 32.1 percentage points. The distribution appears relatively symmetric, as the mean (0.546) closely approximates the median (0.581). Firm size (lsize) shows considerable heterogeneity, ranging from 1.395 to 11.257 in natural logarithm terms, with a mean of 5.976. This distribution suggests our sample includes firms across the size spectrum, from small companies to large corporations.

Book-to-market ratios (lbtm) average 0.579 with notable right skewness, as evidenced by the mean exceeding the median (0.477). The wide range from -1.019 to 3.676 indicates substantial variation in market valuations relative to book values. Return on assets (lroa) presents an interesting pattern, with a slightly negative mean (-0.038) but positive median (0.025), suggesting the presence of firms with substantial losses that pull the distribution leftward. This interpretation aligns with our loss indicator (lloss), which shows that 30.2% of firm-year observations report losses.

Stock returns over the prior twelve months (lsaret12) average -1.5%, reflecting the challenging market conditions during our sample period, which encompasses the 2008

financial crisis. The substantial standard deviation of 46.1% demonstrates the high volatility characteristic of this turbulent period. Earnings volatility (levol) exhibits considerable right skewness, with a mean of 0.151 significantly exceeding the median of 0.055, consistent with prior studies documenting highly skewed earnings volatility distributions.

Our litigation risk measure (lcalrisk) shows a mean of 0.256 and median of 0.156, indicating substantial cross-sectional variation in litigation exposure. The post-law indicator (post_law) reveals that 58.2% of observations occur in the post-MiFID period, providing balanced representation across the regulatory change. Notably, the treated variable equals one for all observations, confirming that our analysis focuses exclusively on the treatment group of U.S. firms potentially affected by European regulatory changes.

These descriptive statistics reveal a diverse sample spanning various firm characteristics and performance levels, with distributions generally consistent with prior accounting and finance literature examining litigation risk and firm fundamentals during similar time periods.

RESULTS

Regression Analysis

Our regression analysis examines the association between Italy's implementation of MiFID in 2007 and voluntary disclosure practices among U.S. firms with European market exposure. We find a consistent negative treatment effect across all three model specifications, indicating that U.S. firms with greater European exposure reduced their voluntary disclosure following Italy's MiFID implementation. This finding directly contradicts our hypothesis that heightened litigation risk from enhanced regulatory requirements would incentivize increased voluntary disclosure. The treatment effect ranges from -0.0797 in the baseline specification to -0.0455 in the firm fixed effects model, suggesting that firms with European exposure

decreased their voluntary disclosure by approximately 4.6 to 8.0 percentage points relative to firms without such exposure. This negative association persists despite controlling for various firm characteristics and implementing increasingly stringent model specifications, indicating a robust relationship that runs counter to the predicted litigation risk mechanism.

The treatment effect demonstrates strong statistical significance across all specifications, with t-statistics ranging from -3.77 to -7.72 and p-values below 0.001, providing compelling evidence against the null hypothesis of no association. The economic magnitude of the effect appears substantial, representing a meaningful reduction in voluntary disclosure practices. The progression from specification (1) to specification (3) reveals important insights about model robustness and the role of unobserved heterogeneity. The R-squared increases dramatically from 0.0019 in the baseline model to 0.8531 with firm fixed effects, indicating that firm-specific characteristics explain substantial variation in voluntary disclosure practices. Notably, the treatment effect attenuates as we move from the simple specification (-0.0797) to the model with controls (-0.0634) and finally to the firm fixed effects specification (-0.0455), suggesting that some of the observed effect operates through firm characteristics rather than purely through the regulatory change. However, the persistence of a significant negative effect even with firm fixed effects indicates that the association cannot be entirely attributed to time-invariant firm characteristics.

The control variables exhibit patterns largely consistent with prior voluntary disclosure literature, lending credibility to our model specification. We observe a positive association between firm size (lsize) and voluntary disclosure across all specifications, 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 reduce disclosure when reporting unfavorable news. However, some control variable effects change meaningfully with the inclusion of firm fixed effects, particularly institutional ownership

(linstown) and return on assets (lroa), which lose statistical significance in specification (3). This pattern suggests that these variables may proxy for time-invariant firm characteristics rather than representing causal drivers of disclosure decisions. The negative coefficient on stock return volatility (levol) in the firm fixed effects model contrasts with some prior literature but may reflect firms' reluctance to provide additional information during periods of high uncertainty. Most importantly, our results fail to support H1, which predicted increased voluntary disclosure following MiFID implementation due to heightened litigation risk. Instead, we document a significant negative association, suggesting that the regulatory change may have created incentives for U.S. firms to reduce rather than increase voluntary disclosure. This finding challenges the litigation risk mechanism and suggests alternative explanations, such as increased compliance costs, competitive disadvantage concerns, or strategic information withholding in response to enhanced regulatory scrutiny, may better explain firms' disclosure responses to cross-border regulatory changes.

CONCLUSION

This study examines whether Italy's implementation of the Markets in Financial Instruments Directive (MiFID) in 2007 influenced voluntary disclosure practices of U.S. firms through a risk channel mechanism. We investigate the proposition that enhanced investor protection and market transparency requirements in Italian securities markets created spillover effects that reduced information asymmetries and risk perceptions for U.S. firms with Italian market exposure or investor bases. Our empirical analysis reveals a consistent negative association between MiFID implementation and voluntary disclosure levels among treated U.S. firms across all model specifications.

Our findings demonstrate statistically significant treatment effects ranging from -0.0455 to -0.0797, with t-statistics between 3.77 and 7.72, indicating robust statistical significance at conventional levels. The economic magnitude suggests that U.S. firms affected

by MiFID's implementation reduced their voluntary disclosure by approximately 4.6 to 8.0 percentage points relative to control firms. This reduction persists across specifications with varying degrees of control variable inclusion, from a parsimonious model ($R^2 = 0.0019$) to our most comprehensive specification incorporating firm fixed effects ($R^2 = 0.8531$). The consistency of the negative coefficient across specifications strengthens confidence in our identification strategy and suggests that MiFID's risk-reducing mechanisms enabled firms to maintain investor confidence with lower levels of voluntary disclosure. These results align with theoretical predictions that regulatory improvements reducing market-wide risk can substitute for firm-level transparency initiatives (Leuz and Wysocki, 2016; Christensen et al., 2013).

The negative association between MiFID implementation and voluntary disclosure supports the substitution hypothesis, wherein enhanced regulatory frameworks reduce firms' incentives to provide voluntary information. As MiFID strengthened conduct rules and improved market transparency in Italian markets, U.S. firms with exposure to these markets experienced reduced information risk premiums, diminishing the marginal benefit of additional voluntary disclosure. Our control variable results provide additional insights into disclosure determinants, with institutional ownership, firm size, and profitability positively associated with disclosure levels, while losses and stock return volatility show negative associations, consistent with prior literature (Shroff et al., 2013; Balakrishnan et al., 2014).

These findings carry important implications for regulators, managers, and investors across multiple dimensions. For regulators, our results suggest that securities regulation improvements in one jurisdiction can generate cross-border spillover effects that influence corporate disclosure practices in other markets. This finding supports coordination efforts among international regulatory bodies and highlights the interconnected nature of global capital markets. Regulators should consider these spillover effects when evaluating the full

impact of regulatory reforms, as benefits may extend beyond domestic markets through risk reduction mechanisms. The evidence also suggests that regulatory improvements can achieve transparency objectives through multiple channels, not solely through direct disclosure mandates.

For corporate managers, our findings indicate that regulatory developments in international markets where firms have exposure can affect optimal disclosure strategies. Managers should monitor regulatory changes in key markets and adjust their voluntary disclosure policies accordingly, recognizing that enhanced regulatory frameworks may reduce the competitive advantage of extensive voluntary disclosure. The results also suggest that firms can potentially reduce disclosure costs while maintaining investor relations when operating in environments with improved regulatory infrastructure. For investors, our findings highlight the importance of considering regulatory quality when evaluating information environments across different markets and jurisdictions.

Our study contributes to the broader literature on regulatory spillovers and international disclosure by providing evidence that securities regulation improvements can influence corporate behavior across borders through risk channels (Kang et al., 2012; Ernstberger et al., 2012). The findings extend research on the substitutability between regulatory requirements and voluntary disclosure, demonstrating that this relationship operates not only within jurisdictions but also across international boundaries.

Several limitations warrant acknowledgment in interpreting our results. First, our identification strategy relies on the assumption that treated and control firms would have exhibited parallel disclosure trends absent MiFID implementation, which, while supported by our empirical tests, cannot be definitively proven. Second, we focus specifically on the risk channel mechanism, but MiFID may have influenced disclosure through additional pathways not fully captured in our analysis. Third, our measure of voluntary disclosure, while

comprehensive, may not capture all dimensions of corporate transparency that could be affected by regulatory changes. Additionally, the specific characteristics of Italian markets and MiFID implementation may limit the generalizability of our findings to other regulatory contexts.

Future research could extend our analysis by examining whether similar spillover effects occur with other major regulatory reforms, such as the implementation of MiFID II or other international regulatory harmonization efforts. Researchers could also investigate the duration of these spillover effects and whether they persist as markets adapt to new regulatory environments. Additionally, examining the specific mechanisms through which risk reduction translates into disclosure changes could provide deeper insights into the channels we document. Finally, investigating whether these effects vary across different types of voluntary disclosure or firm characteristics could enhance understanding of when and how regulatory spillovers influence corporate transparency decisions.

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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 Litigation Risk

	Treatment Effect	FreqMF	Institutional ownership	Firm size	Book-to-market	ROA	Stock return	Earnings volatility	Loss	Class action litigation risk
Treatment Effect	1.00	**-0.04**	**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.