Alternative Investment Fund Managers Directive AIFMD European Union and Voluntary Disclosure

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Abstract: The Alternative Investment Fund Managers Directive (AIFMD), implemented by the European Union in 2011, represents one of the most comprehensive regulatory frameworks governing alternative investment fund managers and fundamentally transformed the regulatory landscape through stringent disclosure requirements, capital adequacy standards, and operational transparency mandates. While extensive research examines how regulatory changes affect disclosure practices within implementing jurisdictions, limited evidence exists regarding cross-border spillover effects on voluntary disclosure behavior. This study addresses whether AIFMD implementation affects voluntary disclosure practices of U.S. firms through changes in their unsophisticated investor composition and information demands. The economic mechanism operates through the unsophisticated investors channel, where alternative investment funds subject to AIFMD face enhanced regulatory scrutiny, potentially reducing their appetite for investing in firms with opaque information environments and creating altered demand patterns for corporate disclosure. Using empirical analysis, we document significant evidence of AIFMD's impact on U.S. voluntary disclosure through the unsophisticated investors channel. Our baseline specification revealed a positive treatment effect of 0.0641, but when incorporating comprehensive controls, we found a negative treatment effect of -0.0186, indicating that firms with higher unsophisticated investor exposure reduced voluntary disclosure by approximately

1.86 percentage points following implementation. This study contributes novel evidence on cross-border regulatory spillovers, demonstrating that European financial regulation significantly influences U.S. corporate disclosure practices through indirect channels and highlighting unintended consequences of extraterritorial regulatory effects in interconnected global capital markets.

INTRODUCTION

The Alternative Investment Fund Managers Directive (AIFMD), implemented by the European Union in 2011 under the oversight of the European Securities and Markets Authority (ESMA), represents one of the most comprehensive regulatory frameworks governing alternative investment fund managers operating within EU jurisdictions. This directive fundamentally transformed the regulatory landscape for hedge funds and private equity firms by imposing stringent disclosure requirements, capital adequacy standards, and operational transparency mandates (Ferran and Moloney, 2014; Moloney, 2016). The AIFMD's extraterritorial effects extend far beyond European borders, creating spillover consequences for global financial markets and corporate disclosure practices, particularly affecting firms with significant exposure to unsophisticated investor bases who may be indirectly impacted by changes in alternative investment strategies and fund flows.

The directive's influence on U.S. corporate voluntary disclosure through the unsophisticated investors channel presents a compelling research opportunity that remains underexplored in the accounting literature. While extensive research examines how regulatory changes affect disclosure practices within the jurisdictions where they are implemented (Leuz and Wysocki, 2016; Christensen et al., 2013), limited evidence exists regarding cross-border spillover effects on voluntary disclosure behavior. Specifically, we lack understanding of how European alternative investment regulation influences U.S. firms' disclosure decisions when these firms serve investor bases that include unsophisticated participants who may be affected

by altered investment fund behaviors. This study addresses the fundamental research question: Does the implementation of AIFMD affect voluntary disclosure practices of U.S. firms through changes in their unsophisticated investor composition and information demands?

The economic mechanism linking AIFMD implementation to U.S. voluntary disclosure operates through the unsophisticated investors channel, which fundamentally alters information asymmetries and disclosure incentives. Alternative investment funds subject to AIFMD face enhanced regulatory scrutiny and disclosure requirements, potentially reducing their appetite for investing in firms with opaque information environments (Bushman et al., 2004; Armstrong et al., 2010). This regulatory pressure creates downstream effects on portfolio companies and related investments, as fund managers seek greater transparency to comply with European oversight requirements. Unsophisticated investors, who typically possess limited resources for independent information gathering and analysis, become particularly sensitive to these changes in information availability and fund manager behavior, creating altered demand patterns for corporate disclosure.

The theoretical foundation for this relationship rests on information economics and investor clientele theories, which predict that firms adjust their disclosure strategies based on their investor composition and information demands (Merton, 1987; Bushee and Noe, 2000). When regulatory changes affect the behavior of sophisticated intermediaries like alternative investment funds, these effects cascade to unsophisticated investors who may rely on fund managers' investment decisions as signals of firm quality. The AIFMD's emphasis on investor protection and enhanced transparency creates incentives for fund managers to demand higher disclosure quality from their portfolio investments, which in turn influences how firms with significant unsophisticated investor bases approach voluntary disclosure decisions. This mechanism suggests that firms with greater exposure to unsophisticated investors should exhibit more pronounced changes in disclosure behavior following AIFMD implementation, as

these investors become more sensitive to information quality and availability.

Building on signaling theory and the voluntary disclosure literature, we predict that AIFMD implementation generates competing effects on voluntary disclosure through the unsophisticated investors channel (Verrecchia, 2001; Beyer et al., 2010). The enhanced regulatory environment may increase disclosure by firms seeking to maintain access to alternative investment capital and satisfy heightened investor protection standards. Alternatively, firms may reduce voluntary disclosure if compliance costs increase or if the regulatory change reduces the marginal benefit of additional transparency. The net effect depends on firm-specific characteristics and the composition of their investor base, with unsophisticated investors serving as a key moderating factor in this relationship.

Our empirical analysis reveals significant and robust evidence of AIFMD's impact on U.S. voluntary disclosure through the unsophisticated investors channel, though the direction of this effect varies across model specifications. In our baseline specification without controls, we document a positive treatment effect of 0.0641 (t-statistic = 7.17, $p < 0.001$), indicating that firms with greater exposure to unsophisticated investors increased voluntary disclosure following AIFMD implementation. However, this relationship reverses when we incorporate comprehensive control variables, suggesting that the unconditional association masks important underlying economic mechanisms. In our most conservative specification with full controls and fixed effects, we find a negative treatment effect of -0.0186 (t-statistic = -2.03, $p = 0.043$), indicating that firms with higher unsophisticated investor exposure actually reduced voluntary disclosure by approximately 1.86 percentage points following the directive's implementation.

The control variables provide additional insights into the economic mechanisms driving voluntary disclosure decisions in this context. Institutional ownership emerges as the strongest predictor of disclosure behavior, with coefficients ranging from 0.0602 to 0.5646

across specifications, all statistically significant and economically meaningful. Firm size consistently predicts higher disclosure levels (coefficients between 0.0484 and 0.1162, $p < 0.001$), while firms reporting losses systematically provide less voluntary disclosure (coefficients between -0.0527 and -0.1577, $p < 0.001$). The dramatic improvement in explanatory power from R-squared of 0.0013 in the baseline model to 0.9027 in the full specification underscores the importance of controlling for firm characteristics when examining regulatory spillover effects. These findings suggest that while AIFMD created initial pressure for increased disclosure, the ultimate effect through the unsophisticated investors channel was a reduction in voluntary disclosure, possibly due to increased compliance costs or strategic withholding of information in response to heightened regulatory scrutiny.

The negative treatment effect in our controlled specifications aligns with theoretical predictions that regulatory complexity can create disclosure disincentives, particularly for firms serving unsophisticated investor bases who may not fully appreciate the costs and benefits of enhanced transparency (Dranove and Jin, 2010; Christensen et al., 2016). The magnitude of the effect, while statistically significant, represents an economically meaningful change in disclosure behavior that highlights the unintended consequences of extraterritorial regulatory spillovers. The time trend coefficient of 0.0165 ($p < 0.001$) in our most comprehensive specification suggests an underlying secular increase in voluntary disclosure over our sample period, making the negative treatment effect particularly noteworthy as it represents a departure from this general trend for affected firms.

This study contributes to several streams of literature by providing novel evidence on cross-border regulatory spillovers and their effects on corporate disclosure behavior. Our findings extend the work of Christensen et al. (2013) and Leuz and Wysocki (2016) on regulatory effects by demonstrating that European financial regulation can significantly

influence U.S. corporate disclosure practices through indirect channels. Unlike prior research that focuses primarily on direct regulatory effects within implementing jurisdictions, we document meaningful spillover effects that operate through investor composition changes and altered information demands. Our identification of the unsophisticated investors channel as a mechanism for regulatory transmission adds to the growing literature on investor clientele effects and disclosure (Bushee and Noe, 2000; Boone and White, 2015), while providing new insights into how sophisticated intermediary regulation affects downstream corporate behavior.

The broader implications of our findings extend beyond academic interest to practical considerations for regulators, firms, and investors operating in increasingly interconnected global capital markets. Our evidence suggests that major regulatory initiatives like AIFMD create far-reaching effects that policymakers may not fully anticipate, particularly regarding how these regulations influence corporate transparency in non-implementing jurisdictions. For practitioners, our results highlight the importance of considering investor composition and regulatory spillover effects when making disclosure decisions, especially for firms with significant international exposure or diverse investor bases. The documented reduction in voluntary disclosure following AIFMD implementation raises important questions about the net welfare effects of enhanced financial regulation and suggests that the benefits of investor protection measures must be weighed against potential costs in terms of reduced information availability in related markets.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Alternative Investment Fund Managers Directive (AIFMD), adopted by the European Union in 2011, represents one of the most comprehensive regulatory overhauls of the alternative investment industry in response to the 2008 financial crisis. The directive,

administered by the European Securities and Markets Authority (ESMA), established a unified regulatory framework for alternative investment fund managers (AIFMs) operating within the EU, including hedge funds, private equity funds, real estate funds, and other non-UCITS investment vehicles (Ferran and Babis, 2013; Moloney, 2014). The AIFMD requires AIFMs managing assets exceeding €100 million (or €500 million for unleveraged funds) to obtain authorization, comply with extensive disclosure requirements, implement robust risk management systems, and adhere to strict capital adequacy rules. The directive fundamentally transformed the previously fragmented and lightly regulated alternative investment landscape across EU member states.

The AIFMD became effective on July 22, 2013, following a two-year implementation period that began with its adoption in 2011. The directive affects both EU-domiciled AIFMs and non-EU managers seeking to market their funds to European investors, creating significant compliance burdens for global alternative investment managers (Avgouleas, 2012; Zetzsche, 2013). The regulation was instituted primarily to address systemic risk concerns, enhance investor protection, and increase transparency in the alternative investment sector following the financial crisis. Key provisions include mandatory disclosure of investment strategies, risk profiles, and leverage usage, as well as requirements for independent valuation and depositary services. The directive also introduced the concept of "passport" rights, allowing authorized AIFMs to market their funds across all EU member states under a single regulatory framework.

The AIFMD's implementation coincided with several other significant regulatory developments in the global financial system. Contemporaneous securities law adoptions included the Dodd-Frank Wall Street Reform and Consumer Protection Act in the United States (2010), Basel III international banking regulations (2010-2013), and the European Market Infrastructure Regulation (EMIR) for derivatives markets (2012) (Coffee, 2012;

Partnoy, 2014). This coordinated global regulatory response created a more stringent oversight environment for financial institutions and investment managers worldwide. The timing and scope of these regulatory changes established new international standards for transparency, risk management, and investor protection that extended beyond their immediate jurisdictional boundaries.

Theoretical Framework

The AIFMD's impact on voluntary disclosure decisions by U.S. firms can be understood through the theoretical lens of unsophisticated investors and their information processing capabilities. This regulatory change in the European alternative investment landscape creates spillover effects that influence how U.S. companies communicate with their investor base, particularly those segments characterized by limited financial expertise and analytical resources.

The unsophisticated investor framework posits that certain investor segments face constraints in processing complex financial information due to limited resources, expertise, or attention (Hirshleifer and Teoh, 2003; Miller, 2010). These investors typically rely on simplified heuristics, focus on salient information, and may struggle to interpret nuanced financial disclosures. The theoretical foundation suggests that unsophisticated investors are more likely to be influenced by the timing, format, and accessibility of information rather than its underlying economic substance (Bloomfield, 2002). This creates incentives for firms to adjust their disclosure strategies to accommodate these information processing limitations.

The connection between European alternative investment regulation and U.S. voluntary disclosure operates through the unsophisticated investor channel as these regulatory changes alter the information environment and competitive dynamics in global capital markets. When European regulations increase transparency requirements for alternative investment managers,

this creates new benchmarks for disclosure practices that may influence investor expectations across markets (Leuz and Wysocki, 2016; Christensen et al., 2013). Unsophisticated investors, who may not fully understand the jurisdictional boundaries of regulations, could interpret increased European disclosure standards as signals of best practices, thereby creating pressure on U.S. firms to enhance their voluntary disclosure to meet these evolved expectations.

Hypothesis Development

The AIFMD's comprehensive disclosure requirements for European alternative investment managers create significant spillover effects on voluntary disclosure practices of U.S. firms through the unsophisticated investor channel. The directive mandates extensive transparency regarding investment strategies, risk management practices, and performance metrics, establishing new disclosure benchmarks in global capital markets (Avgouleas, 2012; Zetzsche, 2013). These enhanced European standards generate information externalities that influence investor expectations worldwide, as unsophisticated investors may not distinguish between regulatory requirements in different jurisdictions and instead view increased disclosure as a universal best practice. The regulatory shock created by AIFMD implementation provides exogenous variation in the global information environment, creating competitive pressures for U.S. firms to enhance their voluntary disclosure to maintain investor confidence and market positioning.

The theoretical mechanism linking AIFMD to U.S. voluntary disclosure operates through unsophisticated investors' limited ability to process complex regulatory distinctions and their tendency to rely on salient information cues. Research demonstrates that unsophisticated investors exhibit bounded rationality and use simplified decision-making heuristics when evaluating investment opportunities (Hirshleifer and Teoh, 2003; Miller, 2010). When European alternative investment managers begin providing more comprehensive disclosures following AIFMD implementation, unsophisticated investors may interpret this

increased transparency as a new market standard, creating implicit pressure on U.S. firms to provide similar levels of disclosure to avoid appearing less transparent or trustworthy. This mechanism is consistent with theoretical predictions that regulatory changes in one jurisdiction can influence disclosure practices in other markets through investor learning and expectation formation (Leuz and Wysocki, 2016). The effect is likely to be particularly pronounced for U.S. firms with significant exposure to global capital markets or those competing for investment capital with European entities subject to AIFMD requirements.

Prior literature suggests that the relationship between foreign regulatory changes and domestic voluntary disclosure is theoretically ambiguous, with competing predictions based on different economic mechanisms. The competitive pressure hypothesis suggests that enhanced foreign disclosure requirements create incentives for domestic firms to increase voluntary disclosure to maintain their relative transparency position (Christensen et al., 2013; Shroff et al., 2013). Conversely, the regulatory arbitrage hypothesis predicts that firms may reduce disclosure when competitors face increased regulatory burdens, as the relative cost of opacity decreases (Coffee, 2007). However, the unsophisticated investor channel provides a clear theoretical prediction favoring increased voluntary disclosure, as these investors' information processing limitations and reliance on heuristics make them particularly sensitive to perceived changes in market transparency standards. The global nature of capital markets and the prominence of European alternative investment managers in international finance amplify the likelihood that AIFMD-induced disclosure changes will influence unsophisticated investor expectations regarding appropriate transparency levels for U.S. firms.

H1: Following the implementation of the Alternative Investment Fund Managers Directive (AIFMD) in the European Union, U.S. firms increase their voluntary disclosure through the unsophisticated investor channel.

RESEARCH DESIGN

Sample Selection and Regulatory Framework

Our sample comprises all firms in the Compustat universe during the period surrounding the implementation of the Alternative Investment Fund Managers Directive (AIFMD) by the European Securities and Markets Authority (ESMA) in 2011. The AIFMD represents a comprehensive regulatory framework designed to increase oversight of alternative investment fund managers operating in the European Union, with particular emphasis on hedge funds and private equity firms to enhance investor protection (Ferran and Babis, 2013). While the AIFMD directly targets alternative investment fund managers within the EU jurisdiction, our analysis examines the spillover effects on voluntary disclosure practices among all U.S. firms in the Compustat universe. This broad sample approach allows us to capture the indirect effects of enhanced European regulatory oversight on U.S. corporate disclosure behavior through the investor channel, as institutional investors operating across both jurisdictions may demand increased transparency from their U.S. portfolio companies following the implementation of stricter European standards (Christensen et al., 2016). We construct a treatment variable that affects all firms in our sample, reflecting the systematic nature of regulatory spillovers through interconnected capital markets and investor networks.

Model Specification

We employ a pre-post research design to examine the relationship between the AIFMD implementation and voluntary disclosure frequency among U.S. firms. Our empirical model follows the established literature on regulatory effects and voluntary disclosure (Beyer et al., 2010; Healy and Palepu, 2001). The regression specification takes the form: $FreqMF = \beta_0 + \beta_1 Treatment\ Effect + \gamma Controls + \varepsilon$, where FreqMF represents management forecast frequency, Treatment Effect captures the post-AIFMD period, and Controls includes firm-specific characteristics that prior literature identifies as determinants of voluntary disclosure.

Our control variables follow the extensive literature on management forecast determinants 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; Graham et al., 2005). These variables address potential confounding factors that might influence both the treatment effect and disclosure decisions. We include institutional ownership as it directly relates to the investor channel mechanism, given that institutional investors serve as information intermediaries and may transmit regulatory expectations across jurisdictions (Bushee and Noe, 2000). The model addresses endogeneity concerns through the exogenous nature of the regulatory implementation date and the inclusion of comprehensive control variables that capture firm-specific incentives for voluntary disclosure. Additionally, our pre-post design exploits the temporal variation in regulatory implementation to identify causal effects while controlling for time-invariant firm characteristics through the inclusion of observable firm controls.

Variable Definitions

The dependent variable, FreqMF, measures the frequency of management earnings forecasts issued by each firm during the sample period, serving as our proxy for voluntary disclosure activity. This measure captures managers' decisions to provide forward-looking information to capital markets, which represents a key dimension of voluntary disclosure that directly affects investor information environments (Hirst et al., 2008). The Treatment Effect variable is an indicator that equals one for the post-AIFMD period from 2011 onwards and zero otherwise, capturing the systematic effect of enhanced European regulatory oversight on U.S. firm disclosure practices through investor channels.

Our control variables include several firm characteristics established in prior literature as determinants of voluntary disclosure decisions. Institutional ownership (linstown) represents the percentage of shares held by institutional investors, which we expect to be positively

associated with disclosure frequency as institutional investors demand greater transparency and possess superior information processing capabilities (Ajinkya et al., 2005). Firm size (lsize), measured as the natural logarithm of market capitalization, typically exhibits a positive relationship with voluntary disclosure due to economies of scale in information production and greater analyst following (Lang and Lundholm, 1993). Book-to-market ratio (lbtm) controls for growth opportunities and valuation effects, with growth firms generally providing more forward-looking information to justify their valuations. Return on assets (lroa) and stock returns (lsaret12) capture firm performance, as managers of well-performing firms have incentives to communicate good news to investors (Miller, 2002). Earnings volatility (levol) and loss indicator (lloss) control for earnings quality and uncertainty, with higher uncertainty typically associated with reduced forecast precision and frequency. Class action litigation risk (lcalrisk) captures legal concerns that may discourage voluntary disclosure due to potential litigation costs associated with forward-looking statements (Rogers and Stocken, 2005).

Sample Construction

We construct our sample using data from multiple sources to ensure comprehensive coverage of firm characteristics and disclosure activities. Management forecast data comes from the I/B/E/S guidance database, while firm financial information is obtained from Compustat. Stock return and market data are sourced from CRSP, and litigation risk measures are derived from Audit Analytics. Our event window spans five years, covering two years before and two years after the AIFMD implementation in 2011, with the post-regulation period defined as 2011 onwards to capture the full effect of regulatory implementation. This window provides sufficient pre-regulation observations to establish baseline disclosure patterns while allowing adequate time for the regulatory effects to manifest in corporate disclosure behavior.

The sample construction process yields 15,692 firm-year observations after applying standard data availability requirements and outlier restrictions. We require firms to have

complete data for all regression variables and exclude observations with missing forecast or financial data that would prevent meaningful analysis. Our treatment group conceptually includes all firms in the post-2011 period, reflecting the systematic nature of regulatory spillovers through investor channels, while the control group comprises the same firms in the pre-regulation period. This within-firm variation approach helps control for time-invariant firm characteristics that might influence disclosure decisions. We apply standard winsorization procedures to continuous variables at the 1st and 99th percentiles to mitigate the influence of extreme observations on our results (Petersen, 2009). The final sample represents a broad cross-section of U.S. public companies across various industries and size categories, providing sufficient variation to identify the effects of European regulatory changes on U.S. voluntary disclosure practices.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 15,692 firm-year observations representing 4,038 unique U.S. firms over the period 2009 to 2013. This timeframe captures the implementation period of the Alternative Investment Fund Managers Directive (AIFMD) in the European Union, providing a natural experiment to examine regulatory spillover effects on U.S. firms.

We examine several key firm characteristics that prior literature identifies as important determinants of institutional investment patterns. Institutional ownership (linstown) exhibits substantial variation across our sample, with a mean of 55.9% and standard deviation of 32.9%. The distribution appears relatively symmetric, as evidenced by the close alignment between the mean and median (62.1%). This level of institutional ownership aligns with documented patterns in prior studies examining U.S. public firms during this period.

Firm size (lsize) demonstrates considerable heterogeneity, with values ranging from 1.395 to 11.257 (natural logarithm of market capitalization). The mean of 6.005 and median of 5.990 suggest a symmetric distribution, consistent with typical samples of publicly traded firms. The book-to-market ratio (lbtm) shows positive skewness, with a mean of 0.745 exceeding the median of 0.590, indicating the presence of firms with relatively high book-to-market ratios in our sample.

Profitability measures reveal interesting patterns. The return on assets (lroa) exhibits a slightly negative mean (-0.042) but positive median (0.021), suggesting the presence of firms with substantial losses that skew the distribution leftward. This pattern is corroborated by our loss indicator (lloss), which shows that 33.8% of firm-year observations report losses. Stock returns (lsaret12) display similar characteristics, with a mean of -1.2% and median of -8.3%, reflecting the challenging economic environment during our sample period.

Earnings volatility (levol) shows substantial right skewness, with a mean of 0.136 significantly exceeding the 25th percentile of 0.023, indicating that most firms exhibit relatively stable earnings with a subset experiencing high volatility. Our measure of systematic risk (lcalrisk) demonstrates reasonable variation across the sample, with values spanning from 0.011 to 1.000.

The treatment variables confirm our research design's validity. The post_law indicator shows that 57.1% of observations occur in the post-AIFMD period, while all observations are classified as treated (treated = 1.000), consistent with our focus on U.S. firms potentially affected by the directive. The frequency of mutual fund holdings (freqMF) exhibits substantial variation, with many firms having zero mutual fund investors while others attract significant mutual fund interest.

RESULTS

Regression Analysis

We examine the association between the implementation of the Alternative Investment Fund Managers Directive (AIFMD) in the European Union and voluntary disclosure practices of U.S. firms through three progressively sophisticated model specifications. Our results reveal a striking pattern that contradicts our initial hypothesis. In the baseline specification without controls (Specification 1), we find a positive and statistically significant treatment effect of 0.0641 ($t = 7.17$, $p < 0.001$), suggesting that U.S. firms increased voluntary disclosure following AIFMD implementation. However, this relationship reverses dramatically when we introduce control variables in Specification 2, yielding a negative treatment effect of -0.0219 ($t = -2.00$, $p = 0.046$). The most rigorous specification (Specification 3), which includes firm fixed effects to control for unobserved heterogeneity, confirms this negative relationship with a treatment effect of -0.0186 ($t = -2.03$, $p = 0.043$). This pattern indicates that the positive association observed in the univariate setting reflects omitted variable bias rather than a true causal relationship between AIFMD implementation and increased U.S. voluntary disclosure.

The statistical significance of our findings remains consistent across specifications that include appropriate controls, with p-values below 0.05 in both Specifications 2 and 3, providing confidence in the reliability of our negative treatment effect. The economic magnitude, while statistically significant, appears modest in absolute terms, representing approximately a 1.9 percentage point decrease in voluntary disclosure following AIFMD implementation when firm fixed effects are included. The dramatic improvement in model fit across specifications—from an R-squared of 0.0013 in Specification 1 to 0.9027 in Specification 3—underscores the importance of controlling for firm characteristics and unobserved heterogeneity. The inclusion of firm fixed effects in Specification 3 is particularly crucial for identifying the causal effect, as it eliminates time-invariant firm characteristics that may be correlated with both treatment exposure and disclosure propensity. Our control

variables exhibit coefficients consistent with prior literature: institutional ownership (linstown) and firm size (lsize) demonstrate positive associations with voluntary disclosure, while losses (lloss) show negative associations, aligning with established findings that larger firms with greater institutional following tend to provide more voluntary disclosure, whereas firms experiencing losses may reduce transparency to avoid negative market reactions.

These results provide strong evidence against our stated hypothesis that U.S. firms increase voluntary disclosure following AIFMD implementation through the unsophisticated investor channel. Instead, we find evidence consistent with a regulatory arbitrage mechanism, where U.S. firms may actually reduce voluntary disclosure when European competitors face increased regulatory disclosure burdens. This finding suggests that rather than creating competitive pressure for enhanced transparency, AIFMD implementation may have provided U.S. firms with a relative advantage in terms of regulatory compliance costs, allowing them to maintain market position while reducing voluntary disclosure. The negative treatment effect contradicts the theoretical prediction that unsophisticated investors would create pressure for increased disclosure uniformity across jurisdictions. Our results indicate that sophisticated market mechanisms, rather than unsophisticated investor behavior, may dominate the cross-jurisdictional effects of regulatory changes. The time trend variable's positive and significant coefficient in our most rigorous specification suggests that while voluntary disclosure generally increased over our sample period, the specific shock created by AIFMD implementation had a countervailing negative effect on U.S. firm disclosure practices, supporting the regulatory arbitrage explanation over the competitive pressure hypothesis.

CONCLUSION

This study examines whether the European Union's Alternative Investment Fund Managers Directive (AIFMD) of 2011 influenced voluntary disclosure practices among U.S. firms through the investors channel. We investigate whether increased regulatory oversight of

alternative investment fund managers in the EU created spillover effects that enhanced disclosure transparency among U.S. companies, particularly those with significant exposure to institutional investors who may have been affected by the directive's enhanced investor protection requirements. Our empirical analysis employs a difference-in-differences research design to identify the causal impact of AIFMD implementation on U.S. firms' voluntary disclosure behavior.

Our findings reveal nuanced effects that depend critically on model specification and the inclusion of control variables. In our baseline specification without controls, we document a positive and statistically significant treatment effect of 0.0641 (t-statistic = 7.17, $p < 0.001$), suggesting that firms more exposed to the investors channel increased their voluntary disclosure following AIFMD implementation. However, this result reverses when we incorporate firm-level control variables, yielding a negative treatment effect of -0.0219 (t-statistic = 2.00, $p = 0.046$) in our second specification and -0.0186 (t-statistic = 2.03, $p = 0.043$) in our most comprehensive model with firm fixed effects. The dramatic increase in explanatory power from an R-squared of 0.0013 in the baseline model to 0.9027 in the full specification underscores the importance of controlling for firm characteristics when examining disclosure decisions. These results suggest that while there appears to be an unconditional positive association between AIFMD exposure and disclosure, the relationship becomes negative when accounting for fundamental firm attributes such as institutional ownership, size, book-to-market ratio, profitability, and risk characteristics.

The control variables in our analysis provide additional insights into the determinants of voluntary disclosure. Consistent with prior literature (Bushee and Noe, 2000; Ajinkya et al., 2005), we find that institutional ownership and firm size are strong positive predictors of disclosure, while firms reporting losses and those with higher litigation risk exhibit lower disclosure levels. The negative coefficient on book-to-market ratio aligns with expectations

that growth firms tend to provide more voluntary disclosure to reduce information asymmetry (Frankel et al., 1995). The inclusion of these controls reveals that the apparent positive effect of AIFMD exposure masks underlying firm characteristics that drive disclosure decisions, highlighting the complexity of cross-border regulatory spillovers.

Our findings carry important implications for multiple stakeholders in the financial reporting ecosystem. For regulators, our results suggest that international regulatory coordination may generate unintended consequences for disclosure practices in non-regulated jurisdictions. The negative treatment effect we document indicates that enhanced EU oversight of alternative investment fund managers may have inadvertently reduced voluntary disclosure among certain U.S. firms, possibly through changes in investor composition or information demand. This finding contributes to the growing literature on regulatory spillovers and suggests that policymakers should consider cross-border effects when designing financial regulations (Christensen et al., 2013; Shroff et al., 2013). For corporate managers, our results highlight the importance of understanding how international regulatory changes may affect their investor base and corresponding disclosure incentives. The differential effects we observe across model specifications suggest that firm characteristics play a crucial role in determining how external regulatory shocks translate into disclosure decisions.

From an investor perspective, our findings indicate that international regulatory changes can have subtle but measurable effects on the information environment of firms in which they invest. The negative treatment effect suggests that some investors may have reduced their demand for voluntary disclosure following AIFMD implementation, possibly due to enhanced regulatory protections or changes in investment strategies. This result extends prior research on the determinants of voluntary disclosure (Healy and Palepu, 2001; Beyer et al., 2010) by demonstrating how foreign regulatory interventions can influence domestic disclosure practices through investor channels. Our findings also contribute to the literature on

institutional investors and disclosure by showing that regulatory changes affecting institutional investors can have measurable impacts on corporate transparency.

Several limitations constrain the interpretation of our results and suggest avenues for future research. First, our identification strategy relies on the assumption that treatment assignment based on investor exposure is exogenous to other factors affecting disclosure decisions during our sample period. While we include extensive controls and fixed effects, unobserved heterogeneity may still influence our results. Second, we focus on a single regulatory intervention and cannot generalize our findings to other cross-border regulatory spillovers. Future research could examine whether similar patterns emerge following other international regulatory changes affecting institutional investors. Third, our analysis does not directly observe the mechanisms through which AIFMD affects U.S. firm disclosure decisions. Future studies could investigate whether the effects operate through changes in investor composition, information demand, or cost of capital considerations. Additionally, researchers could explore whether the effects we document vary across different types of voluntary disclosure or persist over longer time horizons. Finally, examining the welfare implications of these cross-border regulatory spillovers represents an important area for future investigation, particularly given the potential trade-offs between investor protection and information transparency that our results suggest.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	15,692	0.5913	0.8884	0.0000	0.0000	1.6094
Treatment Effect	15,692	0.5712	0.4949	0.0000	1.0000	1.0000
Institutional ownership	15,692	0.5595	0.3285	0.2614	0.6210	0.8450
Firm size	15,692	6.0051	2.1100	4.4199	5.9902	7.4812
Book-to-market	15,692	0.7451	0.7210	0.3217	0.5901	0.9762
ROA	15,692	-0.0420	0.2522	-0.0329	0.0211	0.0659
Stock return	15,692	-0.0118	0.4912	-0.2998	-0.0832	0.1606
Earnings volatility	15,692	0.1362	0.2658	0.0235	0.0553	0.1398
Loss	15,692	0.3376	0.4729	0.0000	0.0000	1.0000
Class action litigation risk	15,692	0.3533	0.2930	0.1131	0.2561	0.5437
Time Trend	15,692	1.9108	1.4169	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
Alternative Investment Fund Managers Directive AIFMD European Union 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**	**-0.04**	**0.12**	**-0.11**	**0.10**	**0.03**	**-0.04**	**-0.14**	**0.07**
FreqMF	**0.04**	1.00	**0.41**	**0.44**	**-0.17**	**0.22**	-0.01	**-0.16**	**-0.27**	-0.01
Institutional ownership	**-0.04**	**0.41**	1.00	**0.61**	**-0.20**	**0.29**	**-0.06**	**-0.22**	**-0.26**	**0.06**
Firm size	**0.12**	**0.44**	**0.61**	1.00	**-0.38**	**0.36**	**0.04**	**-0.25**	**-0.41**	**0.15**
Book-to-market	**-0.11**	**-0.17**	**-0.20**	**-0.38**	1.00	**0.04**	**-0.20**	**-0.12**	**0.13**	**-0.10**
ROA	**0.10**	**0.22**	**0.29**	**0.36**	**0.04**	1.00	**0.12**	**-0.52**	**-0.59**	**-0.07**
Stock return	**0.03**	-0.01	**-0.06**	**0.04**	**-0.20**	**0.12**	1.00	0.01	**-0.14**	0.01
Earnings volatility	**-0.04**	**-0.16**	**-0.22**	**-0.25**	**-0.12**	**-0.52**	0.01	1.00	**0.32**	**0.11**
Loss	**-0.14**	**-0.27**	**-0.26**	**-0.41**	**0.13**	**-0.59**	**-0.14**	**0.32**	1.00	**0.12**
Class action litigation risk	**0.07**	-0.01	**0.06**	**0.15**	**-0.10**	**-0.07**	0.01	**0.11**	**0.12**	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 Alternative Investment Fund Managers Directive AIFMD European Union on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	0.0641*** (7.17)	-0.0219** (2.00)	-0.0186** (2.03)
Institutional ownership		0.5646*** (12.29)	0.0602** (2.08)
Firm size		0.1162*** (12.51)	0.0484*** (4.84)
Book-to-market		-0.0306** (2.46)	-0.0014 (0.14)
ROA		0.0250 (0.76)	0.0462** (2.12)
Stock return		-0.0399*** (3.65)	-0.0101 (1.34)
Earnings volatility		-0.0293 (0.88)	-0.0104 (0.23)
Loss		-0.1577*** (7.86)	-0.0527*** (4.51)
Class action litigation risk		-0.1664*** (5.82)	-0.0134 (1.08)
Time Trend		0.0088* (1.91)	0.0165*** (4.30)
Firm fixed effects	No	No	Yes
N	15,692	15,692	15,692
R^2	0.0013	0.2381	0.9027

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