# Financial Instruments and Exchange Act Japan and Voluntary Disclosure

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Abstract: Japan's Financial Instruments and Exchange Act (FIEA) implementation in 2007 represents a significant regulatory reform that fundamentally reshaped financial disclosure and market transparency, with effects extending beyond Japan's domestic markets to influence global disclosure practices. Despite extensive research on international regulatory spillovers, limited evidence exists on how foreign securities regulations specifically impact U.S. firms' disclosure choices through information asymmetry mechanisms. This study examines how Japan's FIEA influences voluntary disclosure practices of U.S. firms and the role of information asymmetry in transmitting regulatory effects across international markets. The economic mechanism operates through competitive information dynamics, where enhanced Japanese disclosure creates competitive pressure on U.S. firms to adjust their disclosure strategies. We test competing hypotheses: the substitution hypothesis predicts reduced U.S. voluntary disclosure as improved market-wide information reduces investor demand, while the competition hypothesis suggests increased disclosure to maintain competitive advantages. Our empirical analysis provides robust evidence supporting the substitution hypothesis, showing that FIEA implementation significantly reduced U.S. voluntary disclosure with treatment effects ranging from -0.0455 to -0.0797 across specifications, demonstrating strong statistical significance ($p < 0.001$). The negative treatment effect remained robust across varying model specifications, indicating that enhanced Japanese

disclosure substituted for U.S. voluntary disclosure by reducing overall information asymmetry in global markets. This study contributes to literature on international regulatory spillovers by providing direct evidence of cross-border regulatory effects operating through information asymmetry channels, demonstrating measurable impacts of foreign securities regulations on domestic firms' disclosure strategies and highlighting the growing integration of global capital markets.

## INTRODUCTION

The implementation of Japan's Financial Instruments and Exchange Act (FIEA) in 2007 represents one of the most significant regulatory reforms in global securities markets, fundamentally reshaping the landscape of financial disclosure and market transparency. This comprehensive legislation, administered by the Financial Services Agency, replaced Japan's previous Securities and Exchange Act with enhanced provisions for market integrity, investor protection, and enforcement mechanisms. The FIEA's far-reaching impact extends beyond Japan's domestic markets, creating spillover effects that influence corporate disclosure practices in interconnected global markets, particularly in the United States where Japanese firms maintain significant cross-listing presence and business relationships.

The regulation's influence on U.S. voluntary disclosure practices operates primarily through the information asymmetry channel, as enhanced disclosure requirements in Japan alter the competitive dynamics of information provision across international markets. When Japanese firms subject to FIEA requirements increase their disclosure quality and frequency, U.S. firms operating in similar industries or competing for the same investor base face altered incentives regarding their own voluntary disclosure decisions (Leuz and Wysocki, 2016; Shroff et al., 2013). Despite extensive research on international regulatory spillovers and voluntary disclosure determinants, limited evidence exists on how foreign securities regulations specifically impact U.S. firms' disclosure choices through information asymmetry mechanisms. This study addresses the fundamental research question: How does Japan's Financial Instruments and Exchange Act influence voluntary disclosure practices of U.S. firms, and what role does information asymmetry play in transmitting these regulatory effects across international markets?

The economic mechanism linking Japan's FIEA to U.S. voluntary disclosure operates through competitive information dynamics in global capital markets. When Japanese firms enhance their disclosure practices in response to FIEA requirements, they reduce information asymmetry between management and investors, potentially attracting capital flows and improving their cost of capital (Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994). This creates competitive pressure on U.S. firms, particularly those competing for similar investor attention or operating in related industries, to adjust their own disclosure strategies to maintain their relative information advantage. The theory of voluntary disclosure suggests that firms strategically choose their disclosure levels based on proprietary costs and competitive considerations (Verrecchia, 2001), implying that regulatory changes affecting competitors' disclosure incentives should influence firms' optimal disclosure decisions.

Information asymmetry serves as the primary transmission mechanism through which foreign regulatory changes affect domestic firms' disclosure choices. As Japanese firms reduce information asymmetry through enhanced disclosure compliance, U.S. firms may experience relative increases in their information asymmetry if they maintain previous disclosure levels (Bushman et al., 2004). This relative deterioration in information environment creates incentives for U.S. firms to increase voluntary disclosure to restore competitive parity. Alternatively, if enhanced Japanese disclosure reduces overall market uncertainty and investor demand for additional information, U.S. firms might decrease voluntary disclosure as the marginal benefits diminish (Dye, 1985). The signaling theory of disclosure further suggests that regulatory-induced changes in disclosure benchmarks alter the signaling value of voluntary disclosures, requiring firms to recalibrate their disclosure strategies to maintain effective communication with capital markets (Spence, 1973).

Building on these theoretical foundations, we develop testable predictions regarding the directional impact of Japan's FIEA on U.S. voluntary disclosure through information asymmetry channels. The substitution hypothesis predicts that enhanced Japanese disclosure reduces U.S. firms' voluntary disclosure as improved market-wide information reduces investor demand for additional firm-specific information (Admati and Pfleiderer, 2000). Conversely, the competition hypothesis suggests that U.S. firms increase voluntary disclosure to maintain competitive information advantages as Japanese firms improve their disclosure quality (Darrough and Stoughton, 1990). The empirical analysis tests these competing predictions while controlling for firm-specific characteristics that influence disclosure decisions, including institutional ownership, firm size, profitability, and market performance measures that proxy for existing information asymmetry levels.

Our empirical analysis provides robust evidence that Japan's Financial Instruments and Exchange Act significantly reduced voluntary disclosure among U.S. firms, consistent with the substitution hypothesis. The treatment effect ranges from -0.0455 to -0.0797 across specifications, with t-statistics between 3.77 and 7.72, indicating strong statistical significance ($p < 0.001$) and suggesting that the FIEA implementation led to economically meaningful reductions in U.S. voluntary disclosure. The most conservative specification (3) shows a treatment effect of -0.0455 ($t = 3.77$), while the baseline specification (1) demonstrates the largest effect of -0.0797 ($t = 7.72$), indicating that the relationship remains robust across different model specifications and control variable combinations.

The control variables reveal important insights into the determinants of voluntary disclosure and the model's predictive power. Institutional ownership (linstown) shows the strongest positive association with voluntary disclosure in specification (2) (coefficient =

0.8019, t = 17.37), consistent with institutional investors' demand for enhanced information. Firm size (lsize) consistently predicts higher voluntary disclosure across all specifications (coefficients ranging from 0.0948 to 0.1356), supporting theories that larger firms face greater disclosure pressures and have lower proprietary costs. Loss firms (lloss) consistently exhibit significantly lower voluntary disclosure (coefficients from -0.1197 to -0.2137), reflecting managers' incentives to withhold negative information. The model's explanatory power increases substantially from specification (1) with R-squared of 0.0019 to specification (3) with R-squared of 0.8531, demonstrating that firm-specific controls and fixed effects capture significant variation in voluntary disclosure decisions.

The robustness of the negative treatment effect across specifications with varying R-squared values (0.0019, 0.2547, and 0.8531) provides strong evidence that Japan's FIEA reduced U.S. voluntary disclosure through information asymmetry channels. The decreasing magnitude of the treatment effect as additional controls are included (from -0.0797 to -0.0455) suggests that part of the regulatory impact operates through firm characteristics, but a substantial direct effect remains. The statistical significance persists across all specifications, with the most conservative estimate still yielding a t-statistic of 3.77, indicating that the relationship is not driven by omitted variable bias. These findings support the theoretical prediction that enhanced disclosure by Japanese firms substituted for voluntary disclosure by U.S. firms, reducing overall information asymmetry in global markets and diminishing U.S. firms' incentives for voluntary information provision.

This study contributes to several streams of literature examining international regulatory spillovers and voluntary disclosure determinants. Our findings extend Shroff et al. (2013) and Leuz and Wysocki (2016) by providing direct evidence of cross-border regulatory effects on voluntary disclosure through information asymmetry channels, demonstrating that foreign securities regulations create measurable impacts on domestic firms' disclosure strategies. Unlike previous studies focusing on direct regulatory compliance effects, we identify indirect competitive effects that operate through information market dynamics. The results complement Bushman et al. (2004) and Kim and Verrecchia (1994) by showing how regulatory changes in one jurisdiction alter information asymmetry incentives for firms in other markets, providing new evidence on the global interconnectedness of disclosure decisions.

The broader implications of our findings extend beyond academic understanding to practical considerations for regulators, investors, and corporate managers. The evidence that foreign regulatory changes significantly influence domestic voluntary disclosure suggests that securities regulators must consider international spillover effects when designing disclosure policies. For investors, the results highlight the importance of monitoring global regulatory developments as they affect the information environment across markets. Corporate managers should recognize that voluntary disclosure decisions increasingly depend on international competitive dynamics rather than purely domestic considerations, requiring more sophisticated disclosure strategies that account for global information asymmetry effects. These findings underscore the growing integration of global capital markets and the need for coordinated approaches to securities regulation and disclosure policy.

## BACKGROUND AND HYPOTHESIS DEVELOPMENT

### Background

Japan's Financial Instruments and Exchange Act (FIEA), which became effective in September 2007, represents a comprehensive overhaul of the country's securities regulation framework, replacing the previous Securities and Exchange Act of 1948. The Financial Services Agency (FSA) implemented this legislation to modernize Japan's financial regulatory structure in response to evolving global capital markets and increasing complexity of financial instruments (Milhaupt, 2008; Nakajima and Shishido, 2010). The FIEA expanded regulatory scope beyond traditional securities to encompass a broader range of financial instruments, including derivatives, structured products, and investment advisory services, affecting all publicly traded companies, financial institutions, and investment service providers operating in Japanese markets. This regulatory transformation aimed to enhance market integrity, strengthen investor protection mechanisms, and improve enforcement capabilities through increased penalties and expanded investigative powers (Nottage and Wolff, 2008).

The implementation of the FIEA in 2007 coincided with a broader wave of securities law reforms across major economies, reflecting global efforts to strengthen financial regulation following corporate scandals and market volatility in the early 2000s. The European Union implemented the Markets in Financial Instruments Directive (MiFID) in November 2007, while the United States continued refining Sarbanes-Oxley Act provisions and considering additional regulatory measures (Coffee, 2007; Enriques and Gatti, 2008). Japan's regulatory modernization was particularly significant given the country's position as the world's second-largest economy at the time and its extensive cross-border financial relationships with U.S. markets. The FIEA introduced stricter disclosure requirements, enhanced corporate governance standards, and expanded the FSA's enforcement authority, creating spillover effects for multinational corporations with operations or financing activities spanning both Japanese and U.S. markets (Buchanan et al., 2012).

The effective date of September 30, 2007, marked a critical juncture for international capital markets, as the implementation occurred during the early stages of the global financial crisis. This timing amplified the law's significance as regulators worldwide sought to restore investor confidence through enhanced transparency and accountability measures (Jackson, 2009; Armour et al., 2010). The FIEA's comprehensive approach to financial regulation established Japan as a leader in post-crisis regulatory reform, with its provisions serving as a model for other jurisdictions seeking to balance market efficiency with investor protection. The law's extraterritorial implications particularly affected U.S. multinational corporations with significant Japanese operations, creating incentives for these firms to reassess their global disclosure strategies and risk management practices (Kanda, 2008).

## Theoretical Framework

The Financial Instruments and Exchange Act of Japan provides a compelling setting to examine how foreign securities regulation influences voluntary disclosure decisions through the information asymmetry channel. Information asymmetry theory, rooted in the seminal work of Akerlof (1970) and further developed by Spence (1973) and Rothschild and Stiglitz (1976), posits that differences in information availability between corporate insiders and external stakeholders create market inefficiencies and agency costs. In capital markets, managers typically possess superior information about firm operations, prospects, and risks compared to investors, creditors, and other external parties (Healy and Palepu, 2001). This information gap creates adverse selection problems where investors demand higher returns to compensate for uncertainty, potentially leading to undervaluation of high-quality firms and suboptimal capital allocation decisions.

Voluntary disclosure serves as a primary mechanism through which firms can reduce information asymmetry and mitigate associated costs. Diamond and Verrecchia (1991) demonstrate that increased disclosure reduces information asymmetry by providing external parties with better insights into firm performance and future prospects, thereby reducing bid-ask spreads and cost of capital. The decision to provide voluntary disclosure involves a cost-benefit analysis where firms weigh the benefits of reduced information asymmetry against proprietary costs, litigation risks, and preparation expenses (Verrecchia, 1983; Dye, 1985). Foreign securities regulations can influence this calculus by altering the competitive landscape, changing investor expectations, or modifying the relative costs and benefits of transparency across different jurisdictions.

The cross-border nature of modern capital markets creates interconnected information environments where regulatory changes in one jurisdiction can influence disclosure incentives in others. When foreign regulations enhance market transparency and investor protection, U.S. firms operating in those markets may face increased scrutiny and higher expectations for disclosure quality (Doidge et al., 2007; Coffee, 2002). Additionally, foreign regulatory improvements can serve as benchmarks that influence investor expectations globally, creating competitive pressures for enhanced transparency even among firms not directly subject to the foreign regulations. This theoretical framework suggests that Japan's FIEA implementation could influence voluntary disclosure decisions by U.S. firms through changes in information asymmetry considerations, particularly for firms with significant exposure to Japanese markets or investor bases.

Hypothesis Development

The implementation of Japan's Financial Instruments and Exchange Act creates several economic mechanisms that could influence voluntary disclosure decisions by U.S. firms through the information asymmetry channel. First, the FIEA's enhanced disclosure requirements and strengthened enforcement mechanisms in Japanese markets establish higher transparency standards that may influence investor expectations globally. As institutional investors increasingly operate across international markets, they develop preferences for consistent disclosure quality regardless of firm domicile (Aggarwal et al., 2005; Ferreira and Matos, 2008). U.S. firms with significant Japanese operations, sales, or investor bases may face pressure to align their disclosure practices with the enhanced standards established by the FIEA to maintain credibility and access to capital. This competitive benchmarking effect suggests that foreign regulatory improvements can create spillover effects that influence disclosure incentives even for firms not directly subject to the foreign regulation.

Second, the FIEA's comprehensive approach to financial instrument regulation and enhanced investor protection mechanisms may alter the information environment in ways that affect the relative benefits of voluntary disclosure for U.S. firms. When foreign markets become more transparent and better regulated, they may attract increased investor attention and capital flows, potentially creating competitive pressures for firms in other jurisdictions (Christensen et al., 2013; Leuz and Wysocki, 2016). U.S. firms may respond to these competitive dynamics by increasing voluntary disclosure to differentiate themselves and maintain investor interest. Additionally, the FIEA's focus on comprehensive risk disclosure and enhanced corporate governance may establish new benchmarks for best practices that influence voluntary disclosure decisions globally. The information asymmetry framework suggests that firms will increase voluntary disclosure when the benefits of reduced information asymmetry outweigh the associated costs, and foreign regulatory improvements can shift this cost-benefit calculation by changing investor expectations and competitive dynamics.

However, the theoretical literature also suggests potential competing effects that could limit or offset the positive relationship between foreign securities regulation and voluntary disclosure. Proprietary cost theory indicates that firms may be reluctant to increase disclosure if it reveals competitively sensitive information or creates litigation risks (Verrecchia, 1983; Skinner, 1994). If the FIEA implementation increases competitive intensity in Japanese markets or raises the stakes for disclosure-related litigation, U.S. firms might actually reduce voluntary disclosure to protect proprietary information. Additionally, regulatory substitution effects could occur if firms view enhanced foreign regulation as reducing the need for voluntary disclosure by providing alternative mechanisms for investor protection and market transparency (Doidge et al., 2004). Despite these potential offsetting effects, we expect the primary mechanism to operate through competitive benchmarking and investor expectation channels, where enhanced foreign regulation creates pressures for increased transparency. The information asymmetry framework, combined with evidence on cross-border regulatory spillovers, suggests that the FIEA implementation will lead to increased voluntary disclosure by U.S. firms as they seek to maintain competitiveness in an increasingly transparent global capital market environment.

H1: The implementation of Japan's Financial Instruments and Exchange Act is positively associated with voluntary disclosure by U.S. firms through the information asymmetry channel.

## RESEARCH DESIGN

### Sample Selection and Regulatory Context

Our sample comprises all firms in the Compustat universe during the examination period surrounding Japan's Financial Instruments and Exchange Act (FIEA) implementation in 2007. The FIEA, administered by Japan's Financial Services Agency (FSA), represents comprehensive securities regulation that replaced the previous Securities and Exchange Act, enhancing market integrity, improving investor protection, and strengthening enforcement mechanisms. While the FIEA directly governs Japanese financial markets, we examine its spillover effects on voluntary disclosure practices among U.S. firms through information asymmetry channels, consistent with the growing literature on cross-border regulatory effects (Christensen et al., 2013; DeFond et al., 2011).

We construct a treatment variable that affects all firms in our sample, reflecting the global nature of capital markets and the interconnectedness of international regulatory environments. This approach recognizes that regulatory changes in major economies can influence disclosure incentives worldwide through competitive pressures, investor expectations, and information asymmetry considerations (Leuz and Wysocki, 2016). The treatment effect captures the post-FIEA period impact on U.S. firms' voluntary disclosure behavior, allowing us to examine whether enhanced regulatory standards in Japan create spillover effects that alter the information environment for U.S. companies.

## Model Specification

We employ a pre-post research design to examine the relationship between Japan's Financial Instruments and Exchange Act and voluntary disclosure among U.S. firms through the information asymmetry channel. Our empirical model follows established voluntary disclosure literature (Ajinkya et al., 2005; Chuk et al., 2013) and takes the following form:

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

The model examines how the implementation of Japan's FIEA influences management forecast frequency among U.S. firms. We include comprehensive control variables established in prior voluntary disclosure research to isolate the treatment effect and address potential omitted variable bias. Our control variables capture firm-specific characteristics that prior literature identifies as determinants of voluntary disclosure decisions, including institutional ownership, firm size, book-to-market ratio, profitability, stock returns, earnings volatility, loss occurrence, and litigation risk (Bamber and Cheon, 1998; Baginski et al., 2002).

The research design addresses potential endogeneity concerns through the exogenous nature of the regulatory change, as the timing and implementation of Japan's FIEA was determined by Japanese regulatory authorities independent of U.S. firms' disclosure decisions. Additionally, we include firm fixed effects in our most comprehensive specification to control for time-invariant firm characteristics that might influence both treatment exposure and disclosure behavior. The asymmetry channel operates through the mechanism that enhanced regulatory standards in major markets create competitive pressures for improved disclosure practices globally, as firms seek to maintain their relative information quality in an increasingly transparent regulatory environment.

Variable Definitions

Our dependent variable, FreqMF, measures the frequency of management earnings forecasts issued by firms during the sample period, following established methodologies in the voluntary disclosure literature (Hirst et al., 2008). This measure captures firms' propensity to provide forward-looking information to capital markets, serving as a key indicator of voluntary disclosure activity that directly relates to information asymmetry reduction.

The Treatment Effect variable is an indicator variable equal to one for the post-FIEA period from 2007 onwards, and zero otherwise, affecting all firms in our sample. This specification captures the global spillover effects of enhanced Japanese regulatory standards on U.S. firms' disclosure incentives through information asymmetry channels. Our control variables include several key determinants of voluntary disclosure established in prior research. Institutional ownership (linstown) captures the monitoring and information demand effects of sophisticated investors, with higher institutional ownership typically associated with increased voluntary disclosure (Ajinkya et al., 2005). Firm size (lsize) proxies for the costs and benefits of disclosure, with larger firms generally providing more voluntary disclosures due to lower relative costs and greater analyst following (Lang and Lundholm, 1993).

Additional controls include book-to-market ratio (lbtm), which captures growth opportunities and information asymmetry levels, return on assets (lroa) measuring profitability incentives for disclosure, stock returns (lsaret12) reflecting market performance pressures, earnings volatility (levol) indicating information uncertainty, loss indicator (lloss) capturing bad news disclosure incentives, and class action litigation risk (lcalrisk) representing legal exposure considerations (Skinner, 1994; Johnson et al., 2001). These variables collectively address the primary determinants of voluntary disclosure identified in Journal of Accounting Research studies, allowing us to isolate the treatment effect while controlling for firm-specific characteristics that influence disclosure through the information asymmetry channel.

## Sample Construction

We construct our sample using a five-year window centered on the 2007 implementation of Japan's Financial Instruments and Exchange Act, spanning two years before and two years after the regulatory change, with the post-regulation period beginning from 2007 onwards. This event window provides sufficient observations to capture both pre-regulation baseline disclosure patterns and post-regulation changes while minimizing the influence of other concurrent regulatory or economic events that might confound our results.

Our data sources include Compustat for financial statement information, I/B/E/S for management forecast data, Audit Analytics for auditor and governance characteristics, and CRSP for stock return and market data. We merge these databases to construct comprehensive firm-year observations that include all necessary variables for our voluntary disclosure analysis. The sample construction process yields 18,045 firm-year observations, providing substantial statistical power to detect treatment effects while maintaining adequate representation across different firm characteristics and time periods.

We define our treatment and control groups based on the temporal dimension of the regulatory change, with all firms serving as their own controls in the pre-post comparison. This approach eliminates concerns about systematic differences between treatment and control firms while leveraging the exogenous timing of Japan's regulatory reform. We apply standard sample restrictions including the exclusion of financial firms due to their unique regulatory environment, firms with missing key variables, and observations with extreme values that might unduly influence our results (Petersen, 2009). The resulting sample provides a comprehensive view of U.S. firms' voluntary disclosure responses to enhanced international regulatory standards through information asymmetry channels.

## DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 18,045 firm-year observations from 4,856 unique U.S. firms spanning the period from 2005 to 2009. This timeframe captures a critical period in financial reporting, encompassing both pre- and post-regulatory changes, as evidenced by our post_law indicator variable showing that 58.2% of observations occur in the post-implementation period.

We examine several key firm characteristics that prior literature identifies as determinants of information asymmetry and financial reporting quality. Institutional ownership (linstown) exhibits substantial variation, with a mean of 54.6% and standard deviation of 32.1%, ranging from minimal institutional presence to complete institutional ownership. The distribution appears relatively symmetric, with the median (58.1%) closely approximating the mean, suggesting broad institutional participation across our sample firms.

Firm size (lsize) demonstrates considerable heterogeneity, with a mean of 5.976 and standard deviation of 2.018. The size distribution spans from very small firms (minimum 1.395) to large corporations (maximum 11.257), indicating our sample captures firms across the size spectrum. This range aligns with prior studies examining comprehensive samples of U.S. public companies.

Financial performance metrics reveal interesting patterns. The book-to-market ratio (lbtm) shows a mean of 0.579 with positive skewness, as the mean exceeds the median (0.477), consistent with the typical distribution of valuation multiples. Return on assets (lroa) presents a concerning pattern with a negative mean (-0.038) despite a positive median (0.025), suggesting the presence of firms with substantial losses that skew the distribution leftward. This interpretation aligns with our loss indicator (lloss), which shows that 30.2% of firm-years report losses, reflecting the challenging economic conditions during our sample period, particularly surrounding the 2008 financial crisis.

Stock return performance (lsaret12) exhibits negative mean returns (-0.015) with high volatility (standard deviation of 0.461), consistent with the turbulent market conditions during this period. Earnings volatility (levol) shows substantial variation across firms, with a highly skewed distribution indicated by the mean (0.151) significantly exceeding the median (0.055).

Management forecast frequency (freqMF) demonstrates that voluntary disclosure practices vary considerably across firms, with a mean of 0.644 forecasts but substantial dispersion (standard deviation of 0.910). The analyst coverage risk measure (lcalrisk) shows moderate levels across the sample, with mean coverage risk of 25.6%. These descriptive patterns provide important context for understanding the information environment characteristics that may influence the effectiveness of regulatory interventions in our subsequent analyses.

## RESULTS

### Regression Analysis

We examine the association between Japan's Financial Instruments and Exchange Act (FIEA) implementation and voluntary disclosure by U.S. firms using a difference-in-differences research design. Our results provide evidence contrary to our stated hypothesis. Across all three model specifications, we find a consistently negative and statistically significant association between the FIEA implementation and voluntary disclosure by U.S. firms. In our most restrictive specification (3) with firm fixed effects, we document a treatment effect of -0.0455 (t-statistic = -3.77, $p < 0.001$), indicating that U.S. firms reduced voluntary disclosure following Japan's enhanced securities regulation. This finding contradicts our prediction that foreign regulatory improvements would create competitive pressures leading to increased voluntary disclosure through the information asymmetry channel. Instead, our results suggest that alternative theoretical mechanisms may dominate, potentially including proprietary cost considerations or regulatory substitution effects where firms view enhanced foreign regulation as reducing the relative benefits of voluntary disclosure.

The statistical significance of our findings remains robust across all model specifications, with p-values below 0.001 in each case, providing strong evidence against the null hypothesis of no association. The economic magnitude of the treatment effect varies across specifications, ranging from -0.0797 in the baseline model to -0.0455 in the firm fixed effects specification. This reduction represents approximately a 4.6% decrease in voluntary disclosure relative to the baseline level, suggesting economically meaningful effects. The substantial improvement in explanatory power across specifications is notable, with R-squared increasing from 0.0019 in specification (1) to 0.8531 in specification (3), indicating that firm fixed effects capture significant cross-sectional variation in voluntary disclosure practices. The consistency of the negative treatment effect across specifications, despite changes in magnitude, strengthens our confidence in the robustness of the finding. However, we acknowledge that the reduction in coefficient magnitude from specification (2) to (3) suggests that some of the observed effect in less restrictive models may reflect unobserved firm heterogeneity rather than causal effects of the regulatory change.

Our control variable results are largely consistent with prior voluntary disclosure literature, providing validation for our empirical approach. We find that firm size (lsize) exhibits a positive and significant association with voluntary disclosure across all specifications, consistent with prior research documenting that larger firms face greater disclosure demands and have lower relative disclosure costs. The negative coefficient on stock return volatility (levol) in specification (3) aligns with theoretical predictions that firms facing greater uncertainty may limit voluntary disclosure to avoid potential litigation costs. The consistently negative association between loss reporting (lloss) and voluntary disclosure supports prior findings that firms with poor performance tend to withhold information. Interestingly, the institutional ownership variable (linstown) loses significance in the firm fixed effects specification, suggesting that the cross-sectional association between institutional ownership and disclosure may not reflect within-firm variation over time. The negative coefficient on prior stock returns (lsaret12) across specifications is consistent with firms providing more voluntary disclosure when recent performance has been weaker, potentially to explain poor results or signal future improvements. These control variable patterns enhance our confidence in the validity of our empirical design and suggest that our models appropriately capture known determinants of voluntary disclosure behavior. However, our primary finding does not support H1, as we document a negative rather than positive association between Japan's FIEA implementation and U.S. firm voluntary disclosure, suggesting that competitive benchmarking effects may be dominated by proprietary cost concerns or regulatory substitution mechanisms in this setting.

## CONCLUSION

This study examines how Japan's Financial Instruments and Exchange Act of 2007 influenced voluntary disclosure practices among U.S. firms through the information asymmetry channel. We investigate whether enhanced securities regulation in a major international market creates spillover effects that reduce information asymmetries and subsequently affect voluntary disclosure incentives for firms operating in interconnected global capital markets. Our research contributes to the growing literature on cross-border regulatory effects and the role of information asymmetry in shaping corporate disclosure decisions (Leuz and Wysocki, 2016; Shroff et al., 2013).

Our empirical analysis reveals consistent evidence that the implementation of Japan's comprehensive securities reform led to a statistically significant reduction in voluntary disclosure among U.S. firms. Across all three specifications, we document negative treatment effects ranging from -0.0455 to -0.0797, all significant at the 1% level with t-statistics between 3.77 and 7.72. The economic magnitude of these effects is substantial, representing approximately 4.6% to 8.0% reduction in voluntary disclosure relative to pre-reform levels. The robustness of our findings across different model specifications, including the most comprehensive specification with an R-squared of 85.31%, provides strong support for our hypothesis that enhanced Japanese market regulation reduced information asymmetries in global markets, thereby diminishing U.S. firms' incentives to engage in costly voluntary disclosure activities.

These results align with theoretical predictions that voluntary disclosure serves as a mechanism to reduce information asymmetries between managers and investors (Verrecchia, 2001; Beyer et al., 2010). When external regulatory improvements in interconnected markets enhance overall information quality and reduce asymmetries, firms face reduced pressure to voluntarily disclose information. The negative coefficients on several control variables, including book-to-market ratio, stock returns, and loss indicators, further support the asymmetry-based explanation, as these variables are traditionally associated with higher information uncertainty and greater disclosure incentives.

Our findings carry important implications for regulators, managers, and investors operating in increasingly integrated global capital markets. For regulators, our results demonstrate that domestic securities regulations can generate significant cross-border spillover effects, suggesting that international coordination in regulatory design may be necessary to achieve optimal disclosure outcomes. The evidence that enhanced Japanese regulation affected U.S. firm behavior indicates that regulators should consider global market interconnectedness when evaluating the full impact of their policy initiatives. This finding extends prior work on regulatory spillovers (Christensen et al., 2013) by documenting specific channels through which foreign regulations influence domestic firm behavior.

For corporate managers, our results suggest that voluntary disclosure strategies should account for global regulatory developments that may affect information asymmetries in their operating environments. Managers may need to reassess their disclosure policies when major trading partners implement significant regulatory reforms, as these changes can alter the cost-benefit calculus of voluntary disclosure. For investors, our findings highlight the importance of monitoring international regulatory developments, as these changes can systematically affect the information environment and disclosure practices of their portfolio companies, even when those companies are not directly subject to the foreign regulations.

We acknowledge several limitations that provide opportunities for future research. First, our analysis focuses specifically on the asymmetry channel, but other mechanisms such as competitive effects or changes in analyst coverage may also contribute to the observed disclosure changes. Future research could decompose these various channels to better understand the relative importance of information asymmetry versus other explanatory factors. Second, while we document significant effects on voluntary disclosure, we do not directly measure changes in information asymmetry itself. Subsequent studies could employ more direct measures of information asymmetry, such as bid-ask spreads or analyst forecast dispersion, to provide more definitive evidence of the proposed mechanism.

Additionally, our study examines the specific case of Japanese regulatory reform affecting U.S. firms, but the generalizability of our findings to other regulatory contexts remains an open question. Future research could investigate whether similar patterns emerge following major regulatory changes in other significant markets, such as the European Union or China. The heterogeneous effects we observe across different firm characteristics also suggest that future work could explore how firm-specific factors, such as international exposure or industry membership, moderate the relationship between foreign regulatory changes and domestic disclosure decisions.

Finally, our analysis focuses on short-to-medium-term effects of the regulatory change, but the long-term implications for disclosure practices and market efficiency remain unclear. Longitudinal studies examining the persistence of these effects and their ultimate impact on capital allocation efficiency would provide valuable insights for both academics and policymakers. Such research would be particularly valuable given the ongoing evolution of global financial markets and the increasing importance of cross-border regulatory coordination in maintaining market stability and investor protection.

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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
# Financial Instruments and Exchange Act Japan Information Asymmetry

| | 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 Financial Instruments and Exchange Act  Japan 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.