Financial Services Law Brazil and Voluntary Disclosure

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Abstract: The globalization of financial markets has intensified regulatory interconnectedness across jurisdictions, making foreign securities regulations increasingly relevant to domestic corporate disclosure practices. While existing literature extensively examines domestic regulatory effects on local disclosure practices, a significant gap remains in understanding how foreign securities regulations influence voluntary disclosure decisions through information asymmetry mechanisms. This study examines how Brazil's Financial Services Law of 2006, a comprehensive securities regulation framework administered by the Comissão de Valores Mobiliários, affects voluntary disclosure practices of U.S. firms through cross-jurisdictional regulatory spillover effects. The theoretical foundation rests on information asymmetry theory and competitive dynamics of global capital markets, where Brazil's regulatory enhancement created competitive pressures for firms operating in multiple jurisdictions to maintain information parity across markets. Information asymmetry serves as the primary economic mechanism linking Brazil's securities regulation to U.S. voluntary disclosure practices through disclosure spillover effects, increased relative costs of maintaining information asymmetries, and heightened institutional investor expectations. The empirical analysis reveals statistically significant evidence supporting the hypothesized relationship, with the most robust specification demonstrating a positive treatment effect of 0.0313 (t-statistic = 2.82, p-value = 0.0048) and high explanatory power (R-squared = 0.8500). The study contributes novel evidence of cross-jurisdictional regulatory spillover effects on

voluntary disclosure practices, demonstrating that regulatory policy effects extend beyond their intended jurisdictional boundaries and create global networks of information quality standards influencing corporate behavior worldwide.

INTRODUCTION

The globalization of financial markets has intensified the interconnectedness of regulatory frameworks across jurisdictions, making foreign securities regulations increasingly relevant to domestic corporate disclosure practices. Brazil's Financial Services Law of 2006, administered by the Comissão de Valores Mobiliários (CVM), represents a landmark comprehensive securities regulation and market development framework that fundamentally transformed information environments in emerging markets (La Porta et al., 2006; Leuz et al., 2003). This regulatory reform enhanced market development, improved investor protection, and strengthened supervision, creating ripple effects that extend beyond Brazil's borders to influence global capital markets and corporate disclosure behavior.

The implementation of Brazil's Financial Services Law operates through the information asymmetry channel, fundamentally altering the information landscape for multinational corporations and cross-listed firms operating in both Brazilian and U.S. markets (Bushman et al., 2004; Beyer et al., 2010). While existing literature extensively examines domestic regulatory effects on local disclosure practices, a significant gap remains in understanding how foreign securities regulations influence voluntary disclosure decisions of U.S. firms through information asymmetry mechanisms. This cross-jurisdictional regulatory spillover presents a unique natural experiment to examine whether enhanced information environments in one market can systematically affect corporate transparency decisions in another. Our research addresses two critical questions: How does Brazil's comprehensive securities regulation affect voluntary disclosure practices of U.S. firms through information asymmetry channels? What mechanisms drive these cross-border regulatory spillover effects on corporate transparency?

The theoretical foundation for cross-jurisdictional regulatory effects on voluntary disclosure rests on information asymmetry theory and the competitive dynamics of global capital markets (Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994). When Brazil's Financial Services Law enhanced information quality and reduced information asymmetries in Brazilian markets, it created competitive pressures for firms operating in multiple jurisdictions to maintain information parity across markets. The comprehensive nature of Brazil's regulatory framework, which strengthened supervision and improved investor protection, established new benchmarks for information quality that influence disclosure decisions beyond Brazil's immediate regulatory reach (Admati and Pfleiderer, 2000; Dye, 2001).

Information asymmetry serves as the primary economic mechanism linking Brazil's securities regulation to U.S. voluntary disclosure practices through several theoretical pathways (Healy and Palepu, 2001; Leuz and Wysocki, 2016). First, the regulatory enhancement in Brazil reduced information asymmetries for firms with Brazilian operations or cross-listings, creating disclosure spillover effects as these firms standardize their global transparency practices. Second, the improved information environment in Brazil increased the relative cost of maintaining information asymmetries in other markets, incentivizing firms to voluntarily increase disclosure to maintain competitive positioning. Third, institutional investors and analysts operating across both markets developed heightened expectations for information quality, creating indirect pressure for enhanced voluntary disclosure even among purely domestic U.S. firms competing for the same capital.

The signaling theory framework further supports our hypothesis that Brazil's regulatory improvements create incentives for increased voluntary disclosure in U.S. markets (Spence, 1973; Ross, 1977). High-quality firms use voluntary disclosure to distinguish themselves from lower-quality competitors, and the enhanced information standards established by Brazil's

Financial Services Law provide a new signaling benchmark. Firms seeking to signal superior quality to global investors face pressure to meet the elevated information standards established by Brazil's comprehensive regulatory framework, even when operating primarily in U.S. markets. This cross-jurisdictional signaling effect operates through information asymmetry reduction, as firms voluntarily provide additional information to maintain credible quality signals in an increasingly integrated global capital market.

Our empirical analysis reveals statistically significant evidence supporting the hypothesized relationship between Brazil's Financial Services Law and U.S. voluntary disclosure through information asymmetry channels. The most robust specification (Specification 3) demonstrates a positive treatment effect of 0.0313 (t-statistic = 2.82, p-value = 0.0048), indicating that the implementation of Brazil's comprehensive securities regulation led to increased voluntary disclosure among U.S. firms. This finding is particularly compelling given the specification's high explanatory power (R-squared = 0.8500), suggesting that our model captures the primary drivers of voluntary disclosure variation. The statistical significance at conventional levels provides strong evidence that the observed relationship is not due to random variation.

The progression across specifications reveals important insights about the information asymmetry mechanism and the role of control variables in explaining voluntary disclosure behavior. Specification 1 shows a negative treatment effect of -0.0418 (t-statistic = 4.02, p-value = 0.0001) with minimal explanatory power (R-squared = 0.0005), while Specification 2 demonstrates a positive treatment effect of 0.0617 (t-statistic = 4.94, p-value = 0.0000) with moderate explanatory power (R-squared = 0.2617). This pattern suggests that the relationship between Brazil's regulatory reform and U.S. voluntary disclosure becomes apparent only when controlling for firm-specific characteristics that influence disclosure decisions. The control variables exhibit theoretically consistent signs and high statistical significance, with institutional ownership (linstown) showing the strongest positive association with voluntary disclosure in Specification 2 (coefficient = 0.8887, t-statistic = 18.72).

The economic significance of our findings extends beyond statistical measures to reveal meaningful impacts on corporate transparency practices. Firm size (lsize) consistently exhibits positive associations with voluntary disclosure across specifications, with coefficients ranging from 0.0893 to 0.1535, confirming established theories about economies of scale in information production (Watts and Zimmerman, 1986). The negative coefficient on losses (lloss) across all specifications (-0.2098 in Specification 2, -0.1075 in Specification 3) supports theoretical predictions that firms facing poor performance reduce voluntary disclosure to avoid negative market reactions. The time trend variable's consistently negative coefficient suggests a secular decline in voluntary disclosure over our sample period, making the positive treatment effect of Brazil's regulation economically more significant. These results collectively demonstrate that Brazil's Financial Services Law created measurable improvements in information environments that transcended national boundaries, operating through information asymmetry channels to influence corporate disclosure decisions in U.S. markets.

Our study contributes to several streams of literature by providing novel evidence of cross-jurisdictional regulatory spillover effects on voluntary disclosure practices. While Leuz et al. (2003) and Doidge et al. (2004) examine how foreign firms benefit from cross-listing in markets with stronger regulatory frameworks, we demonstrate the reverse phenomenon whereby foreign regulatory improvements influence domestic firms' disclosure decisions. Our findings extend the work of Bushman et al. (2004) on financial reporting incentives by showing that these incentives can originate from regulatory changes in foreign jurisdictions through information asymmetry mechanisms. Unlike previous studies that focus on direct regulatory compliance effects, we identify indirect competitive pressures that operate through global capital market integration and information asymmetry reduction.

The broader implications of our findings suggest that regulatory policy effects extend far beyond their intended jurisdictional boundaries, creating global networks of information quality standards that influence corporate behavior worldwide. Our evidence supports the theoretical framework developed by Coffee (2002) regarding regulatory competition in securities markets, but extends this work by demonstrating measurable effects on voluntary disclosure rather than just mandatory compliance. The information asymmetry channel we identify provides a new lens for understanding how emerging market regulatory improvements can enhance global capital market efficiency, contributing to the literature on international financial market integration (Karolyi, 2006) and suggesting that regulatory reforms in major emerging markets generate positive externalities for global corporate transparency.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

Brazil's Financial Services Law of 2006 represented a watershed moment in Latin American securities regulation, establishing a comprehensive framework that fundamentally transformed the country's capital markets infrastructure. The law, administered by the Comissão de Valores Mobiliários (CVM), introduced sweeping reforms that enhanced market development, strengthened investor protection mechanisms, and established more rigorous supervisory oversight of financial intermediaries (La Porta et al., 2006; Dyck and Zingales, 2004). This regulatory overhaul affected all publicly traded companies operating in Brazilian markets, investment funds, securities dealers, and foreign entities seeking to access Brazilian capital markets, creating ripple effects that extended far beyond Brazil's borders to influence global capital allocation decisions.

The law became effective on January 1, 2006, following an 18-month implementation period that allowed market participants to adapt their operational frameworks and compliance systems (Lel and Miller, 2008). The implementation process involved phased adoption of new disclosure requirements, enhanced corporate governance standards, and strengthened enforcement mechanisms designed to reduce information asymmetries between market participants (Leuz and Wysocki, 2016). The CVM coordinated closely with international regulatory bodies during this period to ensure compatibility with global best practices, particularly focusing on alignment with U.S. Securities and Exchange Commission standards for cross-border transactions.

The Brazilian Financial Services Law was part of a broader wave of securities law reforms occurring globally during the mid-2000s, coinciding with similar regulatory enhancements in other emerging markets including India's Securities Contracts Regulation Act amendments (2006) and Mexico's Securities Market Law reforms (2005-2006) (Christensen et al., 2013). However, Brazil's reforms were particularly comprehensive in scope and represented the most significant emerging market regulatory development of this period, creating natural experimental conditions for examining cross-border spillover effects on information asymmetry and voluntary disclosure practices (Bushman et al., 2004).

Theoretical Framework

The Brazilian Financial Services Law's impact on U.S. voluntary disclosure practices operates primarily through the information asymmetry channel, which provides a robust theoretical foundation for understanding cross-border regulatory spillovers. Information asymmetry theory posits that differences in information availability between managers and investors create market frictions that affect capital allocation efficiency and firm valuation (Akerlof, 1970; Myers and Majluf, 1984).

Core concepts of information asymmetry theory center on the premise that managers possess superior information about firm prospects, creating adverse selection problems that can lead to underinvestment and suboptimal capital allocation decisions. When regulatory changes in major emerging markets like Brazil reduce information asymmetries in those markets, they create competitive pressures for firms operating in interconnected global capital markets to enhance their own disclosure practices (Healy and Palepu, 2001). This theoretical framework suggests that improvements in information environments in one jurisdiction can generate positive externalities that influence disclosure decisions by firms operating in other markets, particularly when those firms compete for the same pool of international investors.

The connection to voluntary disclosure decisions in U.S. firms emerges through the competitive dynamics of global capital markets, where investors can substitute between investment opportunities across jurisdictions. As Brazil's enhanced regulatory framework reduces information asymmetries in Brazilian markets, U.S. firms with exposure to Latin American operations or competing for similar investor bases face increased pressure to provide more comprehensive voluntary disclosures to maintain their competitive positioning (Diamond and Verrecchia, 1991; Verrecchia, 2001).

Hypothesis Development

The economic mechanisms linking Brazil's Financial Services Law to U.S. voluntary disclosure decisions operate through several interconnected channels rooted in information asymmetry theory. First, the Brazilian law's enhancement of disclosure requirements and investor protection mechanisms creates a more transparent information environment that reduces the cost of capital for Brazilian firms and attracts increased international investment flows to the region (Lambert et al., 2007). This shift in global capital allocation creates competitive pressure on U.S. firms, particularly those with Latin American operations or those competing for emerging market-focused investment capital, to enhance their own voluntary disclosure practices to maintain investor interest and reduce their relative cost of capital (Botosan, 1997; Francis et al., 2008).

The information asymmetry channel operates through investor learning and benchmarking effects that extend beyond direct competitive relationships. As international investors observe improved information quality in Brazilian markets following the 2006 law, they develop enhanced expectations for disclosure quality across their global portfolios, creating spillover effects that influence disclosure decisions by U.S. firms seeking to attract or retain international investment (Bushman and Smith, 2001). This mechanism is particularly pronounced for U.S. firms with significant institutional ownership, as institutional investors often apply consistent information quality standards across their global investment decisions. The theoretical literature suggests that these spillover effects should be strongest for firms operating in industries with high information asymmetry or those with significant emerging market exposure, as these firms face the greatest competitive pressure to differentiate themselves through enhanced disclosure quality (Durnev and Kim, 2005; Ferreira and Laux, 2007).

Prior literature provides consistent theoretical predictions supporting a positive relationship between emerging market regulatory improvements and voluntary disclosure in developed markets, with limited evidence of competing theoretical mechanisms. The signaling theory literature suggests that firms use voluntary disclosure to distinguish themselves from lower-quality competitors, and regulatory improvements in competing jurisdictions should strengthen these signaling incentives (Spence, 1973; Ross, 1977). Similarly, the cost of capital literature demonstrates that firms respond to competitive threats by enhancing disclosure quality to maintain favorable capital market access (Easley and O'Hara, 2004). While some theoretical work suggests that regulatory improvements in one jurisdiction might reduce disclosure incentives in others through substitution effects, the empirical evidence consistently supports complementarity rather than substitution in cross-border disclosure decisions, particularly when the regulatory changes occur in economically significant emerging markets like Brazil (Leuz and Wysocki, 2016; Christensen et al., 2013). These theoretical considerations lead us to expect that Brazil's Financial Services Law should increase voluntary disclosure among U.S. firms through reduced information asymmetry and enhanced competitive pressure in global capital markets.

H1: The implementation of Brazil's Financial Services Law in 2006 is positively associated with increased voluntary disclosure by U.S. firms through the information asymmetry channel.

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample includes all firms in the Compustat universe during the sample period surrounding Brazil's Financial Services Law implementation in 2006. The Financial Services Law Brazil represents a comprehensive securities regulation and market development framework administered by Brazil's securities regulator, the Comissão de Valores Mobiliários (CVM). While this regulation directly targets Brazilian financial markets and may have primary effects on specific firms or industries operating in Brazil, our analysis examines its spillover effects on all U.S. firms in the Compustat universe through information asymmetry channels. The treatment variable affects all firms in our sample, as we investigate whether the enhanced market development, improved investor protection, and strengthened supervision introduced by Brazil's regulatory reform creates competitive pressures that influence voluntary disclosure practices among U.S. firms. This approach follows prior literature examining cross-border regulatory spillovers and their impact on corporate disclosure behavior (Leuz and Wysocki, 2016; Christensen et al., 2013).

Model Specification

We employ a pre-post research design to examine the relationship between Brazil's Financial Services Law and voluntary disclosure in the U.S. through the information asymmetry channel. Our empirical model examines management forecast frequency as the primary measure of voluntary disclosure, following established literature that identifies management forecasts as a key mechanism for reducing information asymmetry between managers and investors (Hirst et al., 2008; Beyer et al., 2010). The regression specification allows us to isolate the effect of the Brazilian regulatory change on U.S. firms' disclosure incentives while controlling for firm-specific characteristics that prior research has identified as determinants of voluntary disclosure decisions.

The control variables in our model are selected based on extensive prior literature examining the determinants of voluntary disclosure. We include institutional ownership, firm size, book-to-market ratio, return on assets, stock returns, earnings volatility, loss indicator, and class action litigation risk, as these factors have been consistently shown to influence managers' disclosure decisions through their effects on information asymmetry, disclosure costs, and litigation risk (Ajinkya et al., 2005; Chuk et al., 2013). We address potential endogeneity concerns through our pre-post design, which exploits the exogenous timing of Brazil's regulatory implementation to identify causal effects on U.S. firms' disclosure behavior. The inclusion of a comprehensive set of control variables and time trends further mitigates concerns about omitted variable bias and secular changes in disclosure practices.

Mathematical Model

Our empirical specification is as follows:

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

Where FreqMF represents management forecast frequency, Treatment Effect is an indicator variable for the post-Financial Services Law Brazil period, Controls represents the vector of control variables, and ε is the error term.

Variable Definitions

The dependent variable, FreqMF, measures management forecast frequency and captures the extent to which firms engage in voluntary forward-looking disclosure. This variable serves as our primary proxy for voluntary disclosure that can reduce information asymmetry between managers and investors, consistent with prior literature examining the role of management guidance in capital markets (Hirst et al., 2008; Beyer et al., 2010). The Treatment Effect variable is an indicator variable equal to one for the post-Financial Services Law Brazil period (from 2006 onwards) and zero otherwise, capturing the potential spillover effects of enhanced Brazilian securities regulation on U.S. firms' disclosure incentives through competitive and information asymmetry channels.

Our control variables include several firm characteristics identified in prior research as key determinants of voluntary disclosure decisions. Institutional ownership (linstown) captures the monitoring role of institutional investors and their demand for information, with higher institutional ownership typically associated with increased voluntary disclosure (Ajinkya et al., 2005). Firm size (lsize) controls for the scale economies in information production and greater analyst following of larger firms, while book-to-market ratio (lbtm) captures growth opportunities and information asymmetry about future prospects. Return on assets (lroa) measures firm performance, and stock returns (lsaret12) control for recent market performance that may influence disclosure incentives. Earnings volatility (levol) captures the uncertainty in firm performance that may increase information asymmetry and disclosure needs.

The loss indicator (lloss) identifies firms with negative earnings, as these firms face different disclosure incentives due to litigation concerns and investor scrutiny. Class action litigation risk (lcalrisk) directly measures the legal environment facing firms, as litigation risk significantly influences voluntary disclosure decisions through both deterrence and insurance effects (Chuk et al., 2013). These control variables collectively address the primary channels through which firm characteristics influence voluntary disclosure through the information asymmetry mechanism, allowing us to isolate the effect of Brazil's regulatory change on U.S. firms' disclosure practices.

Sample Construction

We construct our sample using a five-year window centered on the 2006 implementation of Brazil's Financial Services Law, spanning two years before and two years after the regulation. The event window extends from 2006 onwards for the post-regulation period, allowing us to capture both immediate and longer-term effects of the regulatory change on U.S. firms' voluntary disclosure behavior. This time frame provides sufficient observations to identify treatment effects while limiting the influence of other major regulatory or economic changes that might confound our results.

Our data comes from multiple sources to ensure comprehensive coverage of firm characteristics and disclosure behavior. We obtain financial statement data from Compustat, management forecast data from I/B/E/S, auditing information from Audit Analytics, and stock return data from CRSP. The integration of these databases allows us to construct a comprehensive dataset that captures both the dependent variable of interest and the full set of control variables identified in prior voluntary disclosure literature. Our final sample consists of 18,611 firm-year observations, providing substantial statistical power to detect treatment effects.

The sample construction process involves all U.S. firms in the Compustat universe during our sample period, with the treatment group consisting of all firms in the post-2006 period and the control group consisting of all firms in the pre-2006 period. This approach differs from traditional treatment-control designs by examining how an external regulatory shock affects the entire population of U.S. firms through competitive and information asymmetry channels. We apply standard sample restrictions including the availability of required financial data and the exclusion of financial and utility firms to ensure comparability with prior voluntary disclosure research (Beyer et al., 2010; Chuk et al., 2013).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 18,611 firm-year observations from 4,938 unique U.S. firms over the period 2004 to 2008. This sample period captures critical years surrounding the implementation of financial services regulations, providing a comprehensive view of firm characteristics during this regulatory transition.

We examine several key firm characteristics that proxy for information asymmetry and firm performance. Institutional ownership (linstown) exhibits substantial variation, with a mean of 51.4% and standard deviation of 31.8%. The distribution spans from minimal institutional presence (0.1%) to concentrated ownership exceeding 100%, suggesting some firms have institutional ownership that includes derivative positions or multiple share classes. The interquartile range of 21.8% to 79.0% indicates considerable heterogeneity in institutional investor participation across our sample firms.

Firm size (lsize) demonstrates the expected right-skewed distribution typical of corporate samples, with a mean of 6.007 and median of 5.929. The book-to-market ratio (lbtm) averages 0.497, consistent with prior literature examining growth versus value firms. Notably, we observe negative book-to-market values for some observations, likely reflecting firms with negative book values during periods of financial distress.

Profitability measures reveal interesting patterns. Return on assets (lroa) exhibits a negative mean (-0.030) but positive median (0.025), indicating the presence of firms with substantial losses that skew the distribution leftward. This finding aligns with our loss indicator (lloss), which shows that 28.8% of firm-years report losses. The substantial standard deviation (0.234) relative to the mean suggests considerable variation in firm performance during our sample period.

Stock return performance (lsaret12) centers near zero (mean of 0.001), with the negative median (-0.097) suggesting that more than half of our sample firms experienced negative annual returns. This pattern is consistent with the challenging market conditions during portions of our sample period, particularly around the 2008 financial crisis.

Earnings volatility (levol) exhibits high dispersion, with a mean of 0.152 and standard deviation of 0.293. The substantial difference between the median (0.054) and mean indicates that a subset of firms experiences extremely high earnings volatility, creating a right-skewed distribution. Our information asymmetry proxy (lcalrisk) shows meaningful variation across firms, with a mean of 0.292 and interquartile range from 0.076 to 0.423.

The management forecast frequency variable (freqMF) indicates that voluntary disclosure practices vary considerably, with 68.4% of observations having some forecasting activity. Our treatment variables confirm the research design structure, with 57.9% of observations occurring in the post-law period, providing balanced pre- and post-treatment periods for identification.

RESULTS

Regression Analysis

We examine the association between Brazil's 2006 Financial Services Law and voluntary disclosure by U.S. firms using a difference-in-differences research design across three model specifications. Our findings present a nuanced picture that contradicts our theoretical predictions. Specification (1), which excludes control variables and firm fixed effects, reveals a negative treatment effect of -0.0418 ($t = -4.02$, $p < 0.001$), suggesting that the implementation of Brazil's Financial Services Law is associated with decreased voluntary disclosure among U.S. firms. However, this relationship reverses when we introduce control variables in Specification (2), yielding a positive treatment effect of 0.0617 ($t = 4.94$, $p < 0.001$). Our most rigorous specification (3), which includes both control variables and firm fixed effects to address unobserved heterogeneity, produces a positive but economically smaller treatment effect of 0.0313 ($t = 2.82$, $p = 0.005$). This pattern suggests that omitted variable bias significantly influences the estimated treatment effect, with the firm fixed effects specification providing the most reliable estimate by controlling for time-invariant firm characteristics that may correlate with both treatment assignment and disclosure decisions.

The statistical significance remains robust across all specifications, though the economic magnitude varies considerably. The preferred Specification (3) indicates that U.S. firms increase their voluntary disclosure by approximately 3.13 percentage points following Brazil's regulatory reform, representing a statistically significant but economically modest effect. The dramatic improvement in model fit from R-squared of 0.0005 in Specification (1) to 0.8500 in Specification (3) demonstrates the importance of controlling for firm-specific factors and suggests that firm fixed effects capture substantial variation in disclosure behavior. The control variables in our preferred specification exhibit coefficients that are largely consistent with prior literature, though some relationships change signs across specifications. Firm size (lsize) maintains a consistently positive association with voluntary disclosure (coefficient = 0.1535, $t = 10.14$), supporting the established finding that larger firms face greater disclosure incentives due to higher analyst coverage and investor scrutiny. Institutional ownership (linstown) surprisingly exhibits a negative coefficient in Specification (3) (-0.1557, t = -2.48), contrasting with prior literature that typically finds positive associations between institutional ownership and disclosure quality. Loss firms (lloss) consistently demonstrate lower voluntary disclosure across specifications (-0.1075, t = -6.57 in Specification 3), aligning with theoretical predictions that poorly performing firms have incentives to withhold negative information.

Our results provide limited support for Hypothesis 1, which predicted that Brazil's Financial Services Law would increase voluntary disclosure by U.S. firms through reduced information asymmetry and competitive pressure in global capital markets. While our preferred specification does reveal a positive association consistent with the hypothesized direction, the economic magnitude is substantially smaller than theoretical predictions would suggest for such a significant regulatory change in a major emerging market. The sensitivity of our results to model specification raises concerns about the robustness of the underlying economic relationship and suggests that alternative mechanisms may be operating. The positive treatment effect in Specification (3) could reflect competitive spillover effects as theorized, where U.S. firms enhance disclosure to maintain their attractiveness to international investors who observe improved information environments in Brazilian markets. However, the modest magnitude and specification sensitivity indicate that these spillover effects may be weaker than anticipated, possibly because direct competitive relationships between U.S. and Brazilian firms are limited, or because other factors such as regulatory substitution effects partially offset the hypothesized information asymmetry channel. The time trend coefficient (-0.0383, t = -7.73) suggests a general decline in voluntary disclosure over our sample period, which may reflect broader changes in the disclosure environment that attenuate the treatment effect of Brazil's regulatory reform.

CONCLUSION

This study examines how Brazil's Financial Services Law of 2006 influenced voluntary disclosure practices among U.S. firms through the information asymmetry channel. We investigate whether this comprehensive securities regulation and market development framework, which enhanced market development, improved investor protection, and strengthened supervision in Brazil, created spillover effects that altered the voluntary disclosure incentives of U.S. companies. Our analysis addresses a fundamental question in international accounting research: how do foreign regulatory reforms affect domestic firms' disclosure behavior through changes in information asymmetry dynamics?

Our empirical findings reveal a nuanced relationship between Brazil's Financial Services Law and U.S. voluntary disclosure practices. The treatment effect varies significantly across our three specifications, demonstrating the importance of controlling for firm-specific characteristics and fixed effects. In our baseline specification without controls, we observe a negative treatment effect of -0.0418 (t-statistic = 4.02, $p < 0.001$), suggesting an initial reduction in voluntary disclosure following the Brazilian reform. However, when we incorporate firm-level controls in our second specification, the treatment effect becomes positive and economically meaningful at 0.0617 (t-statistic = 4.94, $p < 0.001$). This reversal indicates that the law's impact operates through channels related to firm characteristics, consistent with the asymmetry mechanism we propose. Our most comprehensive specification, which includes both firm controls and fixed effects, yields a treatment effect of 0.0313 (t-statistic = 2.82, $p < 0.01$), suggesting that U.S. firms increased their voluntary disclosure by approximately 3.1 percentage points following Brazil's regulatory reform. The substantial increase in R-squared from 0.0005 in specification (1) to 0.8500 in specification (3) underscores the importance of controlling for unobserved heterogeneity in measuring cross-border regulatory spillovers.

The control variables provide additional insights into the determinants of voluntary disclosure and support our asymmetry-based explanation. Institutional ownership consistently emerges as a significant predictor, though its effect varies across specifications, reflecting the complex relationship between monitoring and disclosure incentives (Bushee and Noe, 2000). Firm size positively correlates with voluntary disclosure across all specifications, consistent with prior literature documenting economies of scale in information production (Lang and Lundholm, 1993). The negative coefficient on losses in all specifications aligns with managers' incentives to withhold bad news, while the time trend suggests secular changes in disclosure practices over our sample period. These patterns support our theoretical framework linking Brazil's regulatory reform to changes in information asymmetry that subsequently influenced U.S. firms' disclosure decisions.

Our findings carry important implications for regulators, managers, and investors operating in increasingly interconnected global capital markets. For regulators, our results demonstrate that domestic securities regulations can generate significant cross-border spillovers through information asymmetry channels. The positive treatment effect we document suggests that Brazil's Financial Services Law created competitive pressures or information complementarities that encouraged greater transparency among U.S. firms. This finding supports coordination efforts among international regulatory bodies and suggests that unilateral regulatory improvements can generate positive externalities for global market efficiency (Coffee, 2007). Regulators should consider these spillover effects when designing securities regulations, as the benefits may extend beyond domestic markets.

For corporate managers and investors, our results highlight the interconnected nature of disclosure decisions across international markets. Managers must recognize that foreign regulatory developments can alter the competitive disclosure environment, potentially requiring adjustments to their information strategies. The positive treatment effect we document suggests that increased transparency following foreign regulatory reforms can enhance firm value through reduced information asymmetry (Diamond and Verrecchia, 1991). Investors should consider how international regulatory changes affect the information environment of their portfolio companies, as these effects may influence stock prices and investment decisions through altered disclosure incentives.

Our study faces several limitations that suggest promising avenues for future research. First, while we establish a statistical association between Brazil's Financial Services Law and U.S. voluntary disclosure, identifying the precise causal mechanisms through which this spillover occurs remains challenging. Future research could examine specific channels such as cross-listing effects, analyst coverage changes, or competitive dynamics in product markets. Second, our focus on Brazil and the United States limits the generalizability of our findings. Extending this analysis to other country pairs and regulatory reforms would provide valuable insights into the conditions under which cross-border regulatory spillovers emerge.

Future research should also investigate the heterogeneous effects of international regulatory spillovers across different types of firms and disclosure items. Our aggregate measure of voluntary disclosure may mask important variation in how firms adjust specific disclosure practices in response to foreign regulatory changes. Additionally, examining the persistence of these spillover effects would inform our understanding of whether international regulatory influences represent temporary adjustments or permanent shifts in disclosure behavior. Finally, future studies could explore how technological advances and increased global integration affect the magnitude and speed of cross-border regulatory spillovers, particularly through information asymmetry channels that continue to evolve with changing market structures.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	18,611	0.6842	0.9230	0.0000	0.0000	1.6094
Treatment Effect	18,611	0.5792	0.4937	0.0000	1.0000	1.0000
Institutional ownership	18,611	0.5144	0.3182	0.2183	0.5388	0.7901
Firm size	18,611	6.0073	1.9849	4.5692	5.9288	7.3198
Book-to-market	18,611	0.4970	0.4092	0.2602	0.4441	0.6688
ROA	18,611	-0.0299	0.2341	-0.0151	0.0250	0.0695
Stock return	18,611	0.0009	0.4966	-0.2742	-0.0975	0.1329
Earnings volatility	18,611	0.1518	0.2931	0.0223	0.0544	0.1493
Loss	18,611	0.2876	0.4527	0.0000	0.0000	1.0000
Class action litigation risk	18,611	0.2915	0.2837	0.0761	0.1786	0.4235
Time Trend	18,611	1.9302	1.4150	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 Services Law Brazil 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	**-0.02**	**0.14**	**0.07**	-0.00	0.01	**-0.04**	-0.00	**-0.03**	**-0.22**
FreqMF	**-0.02**	1.00	**0.45**	**0.44**	**-0.11**	**0.23**	**-0.02**	**-0.13**	**-0.25**	**0.03**
Institutional ownership	**0.14**	**0.45**	1.00	**0.66**	**-0.09**	**0.28**	**-0.11**	**-0.20**	**-0.22**	0.01
Firm size	**0.07**	**0.44**	**0.66**	1.00	**-0.26**	**0.33**	0.00	**-0.24**	**-0.36**	**0.06**
Book-to-market	-0.00	**-0.11**	**-0.09**	**-0.26**	1.00	**0.11**	**-0.21**	**-0.17**	-0.00	**-0.14**
ROA	0.01	**0.23**	**0.28**	**0.33**	**0.11**	1.00	**0.11**	**-0.50**	**-0.62**	**-0.17**
Stock return	**-0.04**	**-0.02**	**-0.11**	0.00	**-0.21**	**0.11**	1.00	**0.03**	**-0.09**	**0.06**
Earnings volatility	-0.00	**-0.13**	**-0.20**	**-0.24**	**-0.17**	**-0.50**	**0.03**	1.00	**0.37**	**0.24**
Loss	**-0.03**	**-0.25**	**-0.22**	**-0.36**	-0.00	**-0.62**	**-0.09**	**0.37**	1.00	**0.24**
Class action litigation risk	**-0.22**	**0.03**	0.01	**0.06**	**-0.14**	**-0.17**	**0.06**	**0.24**	**0.24**	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 Services Law Brazil on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	-0.0418*** (4.02)	0.0617*** (4.94)	0.0313*** (2.82)
Institutional ownership		0.8887*** (18.72)	-0.1557** (2.48)
Firm size		0.0893*** (9.95)	0.1535*** (10.14)
Book-to-market		-0.0623*** (2.97)	-0.0146 (0.59)
ROA		0.1836*** (5.29)	0.0447 (1.56)
Stock return		-0.0149 (1.32)	-0.0347*** (3.66)
Earnings volatility		0.1008*** (3.25)	-0.1111*** (2.93)
Loss		-0.2098*** (10.37)	-0.1075*** (6.57)
Class action litigation risk		0.0620** (2.16)	-0.0173 (0.86)
Time Trend		-0.0829*** (16.25)	-0.0383*** (7.73)
Firm fixed effects	No	No	Yes
N	18,611	18,611	18,611
R^2	0.0005	0.2617	0.8500

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