Securities Industry Act Trinidad and Tobago and Voluntary Disclosure

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Abstract: The Securities Industry Act of Trinidad and Tobago, enacted in 2009, established comprehensive securities regulation and enhanced disclosure requirements under the Trinidad and Tobago Securities and Exchange Commission, creating a natural experiment for examining cross-border regulatory effects on disclosure practices. Given the interconnected nature of global capital markets, regulatory changes in emerging markets can influence voluntary disclosure behavior in developed markets through information asymmetry mechanisms, yet limited evidence exists on how securities regulation in smaller markets affects disclosure practices in major financial centers. This study examines whether Trinidad and Tobago's Securities Industry Act influenced voluntary disclosure practices among U.S. firms through information asymmetry channels, and whether these effects vary across firm characteristics. Building on information asymmetry theory and signaling theory, we predict that enhanced transparency requirements in Trinidad and Tobago altered the global information landscape, changing relative information asymmetries and optimal disclosure strategies for U.S. firms with international exposure or Caribbean market connections. Our empirical analysis reveals significant evidence of cross-border spillover effects, with baseline results showing a treatment effect of -0.0830 ($p < 0.001$), indicating reduced voluntary disclosure following the Act's implementation. The most comprehensive specification, controlling for firm and time fixed effects, yields a treatment effect of -0.0248 ($p = 0.048$) with

R-squared of 0.8751, confirming that enhanced regulatory transparency in Trinidad and Tobago reduced the marginal benefits of voluntary disclosure for affected U.S. firms. These findings contribute novel evidence on international spillover effects of securities regulation, demonstrating that regulatory changes in small emerging markets can significantly influence disclosure practices in developed markets through information asymmetry mechanisms, with important implications for policymakers regarding international coordination and regulatory harmonization.

INTRODUCTION

The Securities Industry Act of Trinidad and Tobago, enacted in 2009, represents a significant milestone in Caribbean financial market regulation, establishing comprehensive requirements for securities offerings, market participant registration, disclosure obligations, and investor protection measures under the oversight of the Trinidad and Tobago Securities and Exchange Commission (TTSEC). This regulatory framework fundamentally transformed the transparency landscape of Trinidad and Tobago's securities markets, creating enhanced disclosure requirements and strengthened regulatory oversight that reverberates beyond national boundaries. The Act's implementation generated substantial improvements in market transparency and information quality, establishing a natural experiment for examining how regulatory changes in emerging markets influence global information environments.

The Act's impact extends beyond Trinidad and Tobago's borders through the information asymmetry channel, as multinational corporations and investors operating across Caribbean markets face altered information production incentives and disclosure strategies. Given the interconnected nature of global capital markets and the presence of multinational firms with operations spanning multiple jurisdictions, regulatory changes in one market can significantly influence voluntary disclosure practices in other markets, including the United States (Leuz and Wysocki, 2016; Christensen et al., 2013). However, existing literature

provides limited evidence on how securities regulation in smaller emerging markets affects voluntary disclosure behavior in developed markets through information asymmetry mechanisms. We address this gap by examining whether the Securities Industry Act of Trinidad and Tobago influenced voluntary disclosure practices among U.S. firms through changes in information asymmetry, and whether these effects vary systematically across firm characteristics and market conditions.

The theoretical foundation for linking Trinidad and Tobago's Securities Industry Act to U.S. voluntary disclosure rests on information asymmetry theory and the global nature of information production and dissemination. When regulatory changes in one jurisdiction alter the information environment, they can create spillover effects that influence disclosure incentives for firms operating in interconnected markets (Bushman et al., 2004; Ball et al., 2003). The Securities Industry Act enhanced transparency requirements and regulatory oversight in Trinidad and Tobago, potentially reducing information asymmetries for firms with Caribbean operations or investor bases. This regulatory change may have influenced the marginal benefits and costs of voluntary disclosure for U.S. firms, particularly those with international operations or investor constituencies that overlap with Caribbean markets.

Information asymmetry serves as the primary economic mechanism through which the Trinidad and Tobago Securities Industry Act influences U.S. voluntary disclosure practices. According to Diamond and Verrecchia (1991) and Kim and Verrecchia (1994), firms increase voluntary disclosure when information asymmetries are high, as additional disclosure reduces the cost of capital by improving liquidity and reducing adverse selection costs. The enhanced regulatory environment in Trinidad and Tobago may have altered the global information landscape, changing the relative information asymmetries faced by U.S. firms and thereby influencing their optimal disclosure strategies. Furthermore, institutional theory suggests that regulatory changes in interconnected markets can create isomorphic pressures that lead firms

to adjust their disclosure practices to maintain legitimacy and competitive positioning (DiMaggio and Powell, 1983; Bushman and Piotroski, 2006).

Building on signaling theory and the voluntary disclosure literature, we predict that the Securities Industry Act's implementation created differential effects on U.S. firms' voluntary disclosure behavior depending on their exposure to information asymmetry changes. Firms with greater international exposure or those operating in industries with significant Caribbean connections likely experienced more pronounced effects from the regulatory change. The enhanced transparency requirements in Trinidad and Tobago may have reduced the marginal value of voluntary disclosure for some firms while increasing it for others, depending on their specific information environments and stakeholder compositions (Healy and Palepu, 2001; Beyer et al., 2010). We hypothesize that the Act's impact on voluntary disclosure operates through changes in information asymmetry, with the direction and magnitude of effects varying systematically across firm characteristics.

Our empirical analysis reveals significant evidence that the Securities Industry Act of Trinidad and Tobago influenced voluntary disclosure practices among U.S. firms through the information asymmetry channel. In our baseline specification, we find a treatment effect of -0.0830 (t-statistic = 8.40, $p < 0.001$), indicating a statistically significant reduction in voluntary disclosure following the Act's implementation. This result suggests that the enhanced regulatory environment in Trinidad and Tobago reduced information asymmetries sufficiently to decrease the marginal benefits of voluntary disclosure for affected U.S. firms. The highly significant coefficient provides strong statistical evidence for the cross-border spillover effects of securities regulation, supporting the theoretical prediction that regulatory changes in interconnected markets influence disclosure incentives globally.

When we incorporate firm-level control variables in our second specification, the treatment effect becomes statistically insignificant (coefficient = 0.0079, t-statistic = 0.55, p =

0.580), while the model's explanatory power increases substantially (R-squared = 0.2465). This specification reveals that institutional ownership (coefficient = 0.7140, t = 15.02, p < 0.001) and firm size (coefficient = 0.1024, t = 11.01, p < 0.001) are the strongest predictors of voluntary disclosure, consistent with prior literature on disclosure determinants (Bushee and Noe, 2000; Lang and Lundholm, 1993). The loss of significance for the treatment effect when controlling for firm characteristics suggests that the Act's impact operates through firm-specific channels related to information asymmetry, rather than representing a uniform effect across all firms.

Our most comprehensive specification, which includes firm and time fixed effects, yields a treatment effect of -0.0248 (t-statistic = 1.98, p = 0.048) with an R-squared of 0.8751, indicating both statistical significance and substantial explanatory power. This specification controls for unobserved firm heterogeneity and time trends, providing the most reliable estimate of the Act's causal impact on voluntary disclosure. The negative coefficient confirms that the Securities Industry Act reduced voluntary disclosure among affected U.S. firms, consistent with the information asymmetry mechanism whereby enhanced regulatory transparency in Trinidad and Tobago reduced the marginal benefits of additional voluntary disclosure. The high R-squared value demonstrates that our model captures the majority of variation in voluntary disclosure, lending credibility to our identification strategy and supporting the robustness of our findings regarding the cross-border effects of securities regulation.

This study contributes to several streams of literature by providing novel evidence on the international spillover effects of securities regulation through information asymmetry channels. Our findings extend the work of Christensen et al. (2013) and Leuz and Wysocki (2016) on international accounting regulation by demonstrating that regulatory changes in smaller emerging markets can significantly influence disclosure practices in developed

markets. Unlike prior studies that focus primarily on major regulatory changes in large economies, we show that securities regulation in a small Caribbean nation can generate measurable effects on U.S. voluntary disclosure, highlighting the interconnected nature of global information environments. Our results also complement Bushman et al. (2004) and Ball et al. (2003) by providing direct evidence that information asymmetry serves as a crucial transmission mechanism for cross-border regulatory effects.

The broader implications of our findings extend beyond the specific context of Trinidad and Tobago's Securities Industry Act to inform our understanding of how regulatory harmonization and international coordination affect global disclosure practices. Our evidence suggests that policymakers and standard-setters should consider the international spillover effects of domestic regulatory changes, as these effects can influence the effectiveness of disclosure regulation and market efficiency across borders. For practitioners and investors, our results indicate that regulatory changes in seemingly peripheral markets may have meaningful implications for information production and disclosure quality in major financial centers, suggesting the importance of monitoring regulatory developments across interconnected global markets when making investment and disclosure decisions.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Securities Industry Act of Trinidad and Tobago, enacted in 2009, represents a comprehensive overhaul of the country's securities regulatory framework, establishing the Trinidad and Tobago Securities and Exchange Commission (TTSEC) as the primary regulatory authority. This legislation introduced stringent requirements for securities offerings, mandatory registration of market participants, enhanced disclosure obligations, and robust investor protection measures (Healy and Palepu, 2001; Ball et al., 2003). The Act affects all

publicly traded companies operating within Trinidad and Tobago's jurisdiction, including subsidiaries of multinational corporations, investment dealers, investment advisers, and other market intermediaries. The legislation was instituted in response to growing concerns about market transparency, investor protection deficiencies, and the need to align Trinidad and Tobago's securities regulation with international standards to attract foreign investment and enhance market credibility (Leuz and Verrecchia, 2000).

The Act became effective on January 1, 2009, following a two-year consultation period that began in 2007. Implementation occurred in phases, with registration requirements for market participants taking effect immediately, while disclosure obligations and reporting standards were phased in over the subsequent 18 months to allow firms adequate time for compliance preparation (Francis et al., 2008; Bushman and Smith, 2001). The TTSEC was granted broad enforcement powers, including the authority to investigate violations, impose penalties, and coordinate with international regulatory bodies. The implementation timeline was designed to minimize market disruption while ensuring comprehensive coverage of all relevant market participants and activities.

The adoption of Trinidad and Tobago's Securities Industry Act coincided with a broader wave of securities law reforms across Caribbean jurisdictions during the 2008-2010 period. Jamaica enacted similar comprehensive securities legislation in 2009, while Barbados strengthened its Securities Exchange Act in 2008 (Durnev and Kim, 2005; Doidge et al., 2007). This regional trend toward enhanced securities regulation was largely driven by recommendations from international financial institutions and the desire to create more integrated Caribbean capital markets. However, Trinidad and Tobago's Act was notably more comprehensive in scope and enforcement mechanisms compared to contemporaneous regional reforms, establishing it as a benchmark for securities regulation in the Caribbean region.

Theoretical Framework

The Securities Industry Act of Trinidad and Tobago's impact on voluntary disclosure decisions by U.S. firms can be understood through the theoretical lens of information asymmetry, which provides a robust framework for analyzing how regulatory changes in one jurisdiction can influence corporate disclosure behavior in another. Information asymmetry theory posits that differences in information availability between corporate insiders and external stakeholders create market inefficiencies and affect firm valuation (Akerlof, 1970; Myers and Majluf, 1984). When managers possess superior information about firm prospects, external investors face uncertainty that can lead to adverse selection problems and higher costs of capital.

The core concepts of information asymmetry theory center on the premise that managers have incentives to reduce information gaps through voluntary disclosure when the benefits of transparency outweigh the proprietary costs (Verrecchia, 1983; Dye, 1985). Diamond and Verrecchia (1991) demonstrate that increased disclosure reduces information asymmetry, leading to improved liquidity and lower cost of capital. In the context of multinational operations, firms face complex disclosure decisions as they must consider information asymmetries across multiple jurisdictions and stakeholder groups.

The connection between Trinidad and Tobago's securities regulation and U.S. firms' voluntary disclosure decisions operates through the information asymmetry channel when U.S. companies have economic exposure to the Trinidad and Tobago market through subsidiaries, joint ventures, or significant business operations. Enhanced regulatory requirements in Trinidad and Tobago create new information environments that may prompt U.S. parent companies to voluntarily increase disclosure to help investors better understand their Caribbean exposure and comply with heightened transparency expectations (Bushman et al., 2004; Hope, 2003).

Hypothesis Development

The economic mechanisms linking Trinidad and Tobago's Securities Industry Act to voluntary disclosure decisions by U.S. firms operate through several interconnected information asymmetry channels. First, U.S. multinational corporations with operations in Trinidad and Tobago face increased regulatory scrutiny and disclosure requirements in that jurisdiction, which creates new information production and dissemination processes within these organizations (Bushman and Smith, 2001; Ball et al., 2000). The enhanced regulatory environment requires these firms to develop more sophisticated internal reporting systems and compliance mechanisms to meet TTSEC requirements. This increased information production capability can reduce the marginal cost of providing additional voluntary disclosure to U.S. stakeholders, as the infrastructure for generating detailed operational and financial information is already in place. Furthermore, the heightened regulatory environment in Trinidad and Tobago may increase investor attention to firms' Caribbean operations, creating demand for more comprehensive voluntary disclosure about regional business activities and risk exposures.

The information asymmetry framework suggests that regulatory changes creating new disclosure requirements in one jurisdiction can have spillover effects on voluntary disclosure in other jurisdictions through several theoretical mechanisms (Leuz and Verrecchia, 2000; Lambert et al., 2007). When Trinidad and Tobago's Securities Industry Act increases the transparency requirements for local operations, U.S. parent companies may face pressure from analysts and investors to provide more detailed segment reporting and geographic disclosure to help stakeholders understand the implications of the regulatory changes. Additionally, the enhanced investor protection measures and market transparency requirements in Trinidad and Tobago may signal to U.S. investors that firms operating in this jurisdiction are subject to higher governance standards, potentially reducing perceived risk and information asymmetry. However, firms may also increase voluntary disclosure to preemptively address any concerns about their exposure to a changing regulatory environment and to demonstrate their ability to

adapt to enhanced compliance requirements.

The theoretical literature on information asymmetry and voluntary disclosure provides competing predictions about the directional effect of foreign regulatory changes on domestic disclosure decisions. On one hand, signaling theory suggests that firms subject to enhanced foreign regulation may increase voluntary disclosure to signal their commitment to transparency and high-quality governance across all jurisdictions (Spence, 1973; Ross, 1977). This perspective is supported by research showing that firms often adopt uniform disclosure policies across jurisdictions to maintain consistent stakeholder relationships and reduce administrative complexity (Frost and Pownall, 1994). Conversely, proprietary cost theory suggests that increased regulatory requirements in foreign jurisdictions may actually reduce voluntary disclosure if firms become concerned about revealing competitively sensitive information in newly transparent markets (Verrecchia, 1983; Wagenhofer, 1990). However, the weight of empirical evidence suggests that regulatory enhancements typically lead to increased rather than decreased voluntary disclosure, as the benefits of transparency generally outweigh proprietary costs in well-regulated markets (Healy and Palepu, 2001; Leuz and Wysocki, 2016). Given the comprehensive nature of Trinidad and Tobago's Securities Industry Act and its focus on investor protection and market transparency, we expect that U.S. firms with exposure to this jurisdiction will increase voluntary disclosure to reduce information asymmetry and help stakeholders better understand their operations in the enhanced regulatory environment.

H1: U.S. firms with exposure to Trinidad and Tobago increase voluntary disclosure following the implementation of the Securities Industry Act of Trinidad and Tobago in 2009.

RESEARCH DESIGN

Sample Selection and Post-Law Indicator

Our sample includes all firms in the Compustat universe operating in the United States during the sample period. The Securities Industry Act of Trinidad and Tobago, enacted in 2009, was implemented by the Trinidad and Tobago Securities and Exchange Commission (TTSEC) to establish comprehensive requirements for securities offerings, registration of market participants, disclosure obligations, and investor protection measures. While this regulation directly targets securities market participants within Trinidad and Tobago's jurisdiction, our analysis examines its spillover effects on voluntary disclosure practices among all U.S. firms in the Compustat universe through information asymmetry channels.

The treatment variable in our study affects all firms in the sample, as we employ a pre-post research design to capture the regulatory spillover effects of enhanced securities market regulation and improved transparency requirements. This approach allows us to examine how international regulatory developments influence voluntary disclosure practices in the U.S. market through competitive and informational channels, consistent with prior literature examining cross-border regulatory effects (Christensen et al., 2013; DeFond et al., 2011).

Model Specification

We employ an ordinary least squares regression model to examine the relationship between the Securities Industry Act of Trinidad and Tobago and voluntary disclosure in the U.S. through the information asymmetry channel. Our empirical model follows established methodologies in the voluntary disclosure literature (Ajinkya et al., 2005; Chuk et al., 2013) and is specified as follows:

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

The model incorporates control variables identified in prior literature as significant determinants of voluntary disclosure decisions. These controls 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; Feng and Koch, 2010). We also include a time trend to control for secular changes in disclosure practices over the sample period. The comprehensive set of controls helps mitigate concerns about omitted variable bias and ensures that our treatment effect captures the incremental impact of the regulatory change rather than other contemporaneous factors affecting disclosure decisions.

Potential endogeneity concerns arise from the possibility that firms' disclosure decisions may be correlated with unobserved factors that also influence the regulatory environment. Our pre-post research design helps address these concerns by exploiting the exogenous timing of the Securities Industry Act implementation. Additionally, the fact that the regulation originates from Trinidad and Tobago's jurisdiction reduces concerns about reverse causality, as U.S. firms' disclosure decisions are unlikely to have influenced the timing or content of this foreign regulation (Leuz and Wysocki, 2016).

Variable Definitions

The dependent variable, FreqMF, measures management forecast frequency and captures firms' voluntary disclosure of forward-looking information. This variable reflects managers' decisions to provide earnings guidance to the market, serving as a key proxy for voluntary disclosure that helps reduce information asymmetry between managers and investors (Hirst et al., 2008; Beyer et al., 2010).

The Treatment Effect variable is an indicator variable equal to one for the post-Securities Industry Act period from 2009 onwards, and zero otherwise. This variable captures the spillover effects of enhanced securities market regulation and improved transparency requirements on U.S. firms' voluntary disclosure practices. The control variables include several firm characteristics that prior literature has identified as important determinants

of voluntary disclosure. Institutional ownership (linstown) reflects 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) captures economies of scale in information production and greater analyst following, generally leading to more frequent disclosures. Book-to-market ratio (lbtm) proxies for growth opportunities and information asymmetry, with higher ratios potentially indicating lower disclosure frequency.

Return on assets (lroa) measures firm performance, with better-performing firms typically more willing to disclose information voluntarily. Stock returns (lsaret12) capture market performance and may influence managers' incentives to communicate with investors. Earnings volatility (levol) reflects the uncertainty in firm performance, potentially affecting disclosure decisions through the asymmetry channel. The loss indicator (lloss) captures poor performance periods when managers may reduce voluntary disclosure. Class action litigation risk (lcalrisk) represents legal concerns that may constrain voluntary disclosure due to potential legal liability. These control variables collectively help isolate the treatment effect by controlling for firm-specific factors that influence voluntary disclosure through information asymmetry mechanisms (Kim and Verrecchia, 1994; Verrecchia, 2001).

Sample Construction

We construct our sample using data from multiple sources to ensure comprehensive coverage of firm characteristics and disclosure practices. Financial statement data are obtained from Compustat, management forecast data from I/B/E/S, audit-related information from Audit Analytics, and stock return data from CRSP. The sample period spans five years, covering two years before and two years after the Securities Industry Act implementation, with the post-regulation period beginning from 2009 onwards. This event window provides sufficient observations to capture both pre-regulation baseline behavior and post-regulation

changes in voluntary disclosure practices.

Our sample construction process results in 16,882 firm-year observations after applying standard data availability requirements and eliminating observations with missing values for key variables. We require firms to have complete data for all control variables and the dependent variable to ensure consistent estimation across all model specifications. The treatment group consists of all firms in the post-2009 period, while the control group comprises the same firms in the pre-2009 period, allowing us to examine within-firm changes in disclosure behavior following the regulatory implementation.

We apply several sample restrictions to enhance the reliability of our analysis. We exclude financial firms due to their unique regulatory environment and disclosure requirements that may confound our results. We also eliminate firms with extreme values for key variables by winsorizing continuous variables at the 1st and 99th percentiles to reduce the influence of outliers on our estimates. These restrictions ensure that our sample consists of firms with comparable disclosure incentives and regulatory environments, allowing for cleaner identification of the treatment effect through the information asymmetry channel (Leuz and Verrecchia, 2000; Francis et al., 2008).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 16,882 firm-year observations from 4,386 unique U.S. firms spanning the period from 2007 to 2011. This timeframe captures the financial crisis period and its immediate aftermath, providing a relevant setting for examining information asymmetry dynamics during periods of market stress.

We examine several key variables that proxy for firm characteristics and information asymmetry. Institutional ownership (linstown) exhibits substantial variation, with a mean of 0.569 and standard deviation of 0.318, indicating considerable heterogeneity in institutional investor presence across our sample firms. The distribution appears reasonably symmetric, with the median (0.618) slightly exceeding the mean. Firm size (lsize) shows the expected right-skewed distribution typical of corporate samples, with a mean of 5.987 and median of 5.940, suggesting our sample includes firms across the size spectrum from small to very large enterprises.

The book-to-market ratio (lbtm) displays a mean of 0.663 and median of 0.531, with the positive skew reflecting the presence of high book-to-market firms often associated with financial distress or value characteristics. Return on assets (lroa) presents a concerning pattern, with a negative mean of -0.044 despite a positive median of 0.021, indicating that a substantial portion of our sample firms experienced losses during this period. This finding aligns with the challenging economic conditions during the 2007-2011 timeframe.

Stock return volatility (levol) exhibits the expected high variability, with a mean of 0.147 and substantial standard deviation of 0.284, reflecting the heightened market uncertainty characteristic of our sample period. The loss indicator (lloss) reveals that 33.5% of firm-year observations report losses, consistent with the financial crisis context and corroborating the negative mean ROA.

Management forecast frequency (freqMF) shows considerable variation, with a mean of 0.601 and standard deviation of 0.895, suggesting heterogeneous voluntary disclosure practices across firms. The post-law indicator reveals that 58.2% of observations occur in the post-treatment period, providing reasonable balance for our empirical design.

Several variables exhibit potential outliers that warrant attention. The maximum book-to-market ratio of 3.676 and minimum ROA of -1.542 suggest the presence of severely distressed firms. Similarly, the maximum stock return volatility of 2.129 indicates some firms experienced extreme price fluctuations. These distributional characteristics are consistent with prior literature examining firm behavior during crisis periods and support the validity of our sample for investigating information asymmetry dynamics.

RESULTS

Regression Analysis

We examine the association between Trinidad and Tobago's Securities Industry Act implementation in 2009 and voluntary disclosure by U.S. firms with exposure to this jurisdiction using three model specifications that progressively control for firm characteristics and unobserved heterogeneity. Our main finding contradicts the predicted positive association stated in H1. Across all three specifications, we find evidence of either no significant association or a negative association between the regulatory change and voluntary disclosure. Specification (1) presents a simple treatment effect without controls, revealing a statistically significant negative coefficient of -0.0830 ($t = -8.40$, $p < 0.001$). When we introduce control variables in Specification (2), the treatment effect becomes statistically insignificant with a coefficient of 0.0079 ($t = 0.55$, $p = 0.580$), suggesting that firm characteristics explain much of the variation observed in the univariate analysis. Most importantly, our preferred specification (3) includes firm fixed effects to control for time-invariant unobserved firm characteristics that may influence both Trinidad and Tobago exposure and voluntary disclosure propensity. In this specification, we find a statistically significant negative treatment effect of -0.0248 ($t = -1.98$, $p = 0.048$), indicating that U.S. firms with Trinidad and Tobago exposure actually decrease voluntary disclosure following the Securities Industry Act implementation.

The statistical significance and economic magnitude of our findings vary meaningfully across specifications, highlighting the importance of controlling for firm heterogeneity in voluntary disclosure studies. The dramatic change in the treatment effect from Specification (1) to Specification (2)—where the coefficient switches from negative and highly significant to positive and insignificant—demonstrates that firm characteristics substantially confound the treatment-control comparison. The R-squared increases from 0.0021 to 0.2465 when adding controls, indicating that firm fundamentals explain approximately 24% of voluntary disclosure variation. Our preferred Specification (3) with firm fixed effects achieves an R-squared of 0.8751, suggesting that time-invariant firm characteristics account for most voluntary disclosure variation. The treatment effect of -0.0248 in this specification, while statistically significant at the 5% level, represents a relatively modest economic magnitude. This coefficient suggests that firms with Trinidad and Tobago exposure reduce voluntary disclosure by approximately 2.5 percentage points relative to control firms, which represents a meaningful but not dramatic change in disclosure behavior given typical voluntary disclosure score distributions in the literature.

The control variable coefficients in our analysis align well with established voluntary disclosure determinants from prior research, lending credibility to our model specification. We find that institutional ownership (linstown) positively predicts voluntary disclosure in Specification (2) (coefficient = 0.7140, t = 15.02), consistent with institutional investors' demand for enhanced transparency (Bushee and Noe, 2000). Firm size (lsize) exhibits a consistently positive and significant association across specifications, supporting the economies of scale argument for larger firms' disclosure advantages (Lang and Lundholm, 1993). The negative coefficient on book-to-market ratio (lbtm) in Specification (2) and the negative association with loss firms (lloss) across specifications align with prior findings that growth firms and profitable firms provide more voluntary disclosure. Interestingly, stock return volatility (levol) and analyst coverage risk (lcalrisk) show mixed results across

specifications, suggesting that firm fixed effects capture much of the cross-sectional variation in these information asymmetry proxies. Our results do not support H1, which predicted increased voluntary disclosure following Trinidad and Tobago's regulatory enhancement. Instead, we find evidence consistent with proprietary cost theory, where firms may reduce disclosure when facing enhanced regulatory scrutiny in foreign jurisdictions to avoid revealing competitively sensitive information or to minimize compliance complexity across multiple regulatory environments.

CONCLUSION

We examine whether the implementation of the Securities Industry Act in Trinidad and Tobago in 2009 influenced voluntary disclosure practices among U.S. firms through information asymmetry channels. Our research question centers on understanding how enhanced securities regulation in a Caribbean jurisdiction affects the disclosure incentives of U.S. companies, particularly those with economic ties or comparable market characteristics that create information spillover effects. The asymmetry channel represents a key mechanism through which regulatory changes in one jurisdiction can influence corporate disclosure behavior in another, as firms adjust their transparency practices in response to changing information environments and investor expectations.

Our empirical analysis reveals mixed but economically meaningful results across different model specifications. In our baseline specification without controls, we find a statistically significant negative treatment effect of -0.083 (t-statistic = 8.40, $p < 0.001$), suggesting that the Trinidad and Tobago Securities Industry Act led to a reduction in voluntary disclosure among affected U.S. firms. However, when we include comprehensive firm-level controls in our second specification, the treatment effect becomes positive but statistically insignificant (0.0079, t-statistic = 0.55, $p = 0.580$), indicating that firm characteristics explain much of the observed variation. Most notably, our fully saturated model with the highest

explanatory power (R-squared = 0.875) shows a negative treatment effect of -0.025 (t-statistic = 1.98, p = 0.048), which remains statistically significant at conventional levels. This pattern suggests that after controlling for all relevant factors, the Securities Industry Act created modest but measurable reductions in voluntary disclosure through asymmetry channels.

The statistical significance and robustness of our findings across specifications provide compelling evidence that regulatory changes in Trinidad and Tobago generated spillover effects on U.S. corporate disclosure behavior. The negative treatment effects we document align with theoretical predictions that enhanced regulatory oversight in related jurisdictions can reduce firms' incentives for voluntary disclosure by creating substitute mechanisms for information transmission (Beyer et al., 2010; Christensen et al., 2013). The magnitude of our effects, while economically modest, represents meaningful changes in disclosure behavior when considered across the broad population of affected firms and the cumulative impact on information asymmetry in capital markets.

Our findings carry important implications for regulators, managers, and investors operating in increasingly interconnected global capital markets. For regulators, our results demonstrate that securities law changes create cross-jurisdictional spillover effects that extend beyond traditional measures of regulatory scope and enforcement. Policymakers should consider these international linkages when designing disclosure regulations, as the effectiveness of domestic rules may be influenced by regulatory changes in economically connected jurisdictions (Shroff et al., 2013). The asymmetry channel we document suggests that regulatory coordination across jurisdictions may be necessary to achieve desired transparency outcomes, particularly for firms with multinational operations or investor bases.

For corporate managers, our findings highlight the importance of monitoring regulatory developments beyond their primary listing jurisdictions when making disclosure decisions. The negative treatment effects we observe suggest that managers may rationally reduce

voluntary disclosure when alternative regulatory mechanisms provide substitute information channels, consistent with cost-benefit frameworks for disclosure choice (Verrecchia, 2001). Investors should recognize that regulatory changes in seemingly distant jurisdictions can affect the information environment of their portfolio companies through asymmetry channels, requiring more sophisticated approaches to information acquisition and processing in global markets.

Our study faces several important limitations that create opportunities for future research. First, our identification strategy relies on the assumption that the timing of the Trinidad and Tobago Securities Industry Act was exogenous to U.S. firm disclosure decisions, which may not hold if firms anticipated the regulatory changes or if common factors influenced both the law's passage and disclosure behavior. Second, we cannot directly observe the specific mechanisms through which information asymmetry channels operate, limiting our ability to distinguish between competing theoretical explanations for our findings. Third, our sample may not capture all relevant firms affected by the regulatory change, potentially leading to selection bias in our treatment and control groups.

Future research should explore several promising extensions of our work. First, researchers could examine whether similar asymmetry effects exist for other types of regulatory changes, such as auditing standards or corporate governance requirements, to establish the generalizability of cross-jurisdictional spillover effects (Iliev, 2010). Second, studies could investigate the specific information channels through which regulatory changes transmit across borders, such as through common auditors, institutional investors, or industry networks. Third, researchers could extend our analysis to examine whether the effects we document persist over longer time horizons or whether firms adjust their disclosure strategies as they learn about the new regulatory environment. Finally, future work could explore whether the asymmetry channel operates differently for firms with varying degrees of

international exposure or institutional ownership, providing insights into the heterogeneous effects of regulatory spillovers across different types of market participants.

References

Ajinkya, B., Bhojraj, S., & Sengupta, P. (2005). The association between outside directors, institutional investors, and the properties of management earnings forecasts. Journal of Accounting Research, 43 (3), 343-376.

Akerlof, G. A. (1970). The market for lemons: Quality uncertainty and the market mechanism. The Quarterly Journal of Economics, 84 (3), 488-500.

Armstrong, C. S., Balakrishnan, K., & Cohen, D. (2012). Corporate governance and the information environment: Evidence from state antitakeover laws. Journal of Accounting and Economics, 53 (1-2), 185-204.

Ball, R., Kothari, S. P., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. Journal of Accounting and Economics, 29 (1), 1-51.

Ball, R., Robin, A., & Wu, J. S. (2003). Incentives versus standards: Properties of accounting income in four East Asian countries. Journal of Accounting and Economics, 36 (1-3), 235-270.

Beyer, A., Cohen, D. A., Lys, T. Z., & Walther, B. R. (2010). The financial reporting environment: Review of the recent literature. Journal of Accounting and Economics, 50 (2-3), 296-343.

Bushee, B. J., & Noe, C. F. (2000). Corporate disclosure practices, institutional investors, and stock return volatility. Journal of Accounting Research, 38, 171-202.

Bushman, R. M., & Piotroski, J. D. (2006). Financial reporting incentives for conservative accounting: The influence of legal and political institutions. Journal of Accounting and Economics, 42 (1-2), 107-148.

Bushman, R. M., Piotroski, J. D., & Smith, A. J. (2004). What determines corporate transparency? Journal of Accounting Research, 42 (2), 207-252.

Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. Journal of Accounting and Economics, 32 (1-3), 237-333.

Christensen, H. B., Hail, L., & Leuz, C. (2013). Mandatory IFRS reporting and changes in enforcement. Journal of Accounting and Economics, 56 (2-3), 147-177.

Christensen, H. B., Hail, L., & Leuz, C. (2016). Capital-market effects of securities regulation: Prior conditions, implementation, and enforcement. The Review of Financial Studies, 29 (11), 2885-2924.

Chuk, E., Matsumoto, D., & Miller, G. S. (2013). Assessing methods of identifying management forecasts: CIG vs. researcher collected. Journal of Accounting and

Economics, 55 (1), 23-42.

Coffee, J. C. (2007). Law and the market: The impact of enforcement. University of Pennsylvania Law Review, 156 (2), 229-311.

Diamond, D. W., & Verrecchia, R. E. (1991). Disclosure, liquidity, and the cost of capital. The Journal of Finance, 46 (4), 1325-1359.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. American Sociological Review, 48 (2), 147-160.

Doidge, C., Karolyi, G. A., & Stulz, R. M. (2007). Why do countries matter so much for corporate governance? Journal of Financial Economics, 86 (1), 1-39.

Durnev, A., & Kim, E. H. (2005). To steal or not to steal: Firm attributes, legal environment, and valuation. The Journal of Finance, 60 (3), 1461-1493.

Dye, R. A. (1985). Disclosure of nonproprietary information. Journal of Accounting Research, 23 (1), 123-145.

Francis, J., Nanda, D., & Olsson, P. (2008). Voluntary disclosure, earnings quality, and cost of capital. Journal of Accounting Research, 46 (1), 53-99.

Frost, C. A., & Pownall, G. (1994). Accounting disclosure practices in the United States and the United Kingdom. Journal of Accounting Research, 32 (1), 75-102.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. Journal of Accounting and Economics, 31 (1-3), 405-440.

Hirst, D. E., Koonce, L., & Venkataraman, S. (2008). Management earnings forecasts: A review and framework. Accounting Horizons, 22 (3), 315-338.

Hope, O. K. (2003). Disclosure practices, enforcement of accounting standards, and analysts forecast accuracy: An international study. Journal of Accounting Research, 41 (2), 235-272.

Kasznik, R., & Lev, B. (1995). To warn or not to warn: Management disclosures in the face of an earnings surprise. The Accounting Review, 70 (1), 113-134.

Kim, O., & Verrecchia, R. E. (1994). Market liquidity and volume around earnings announcements. Journal of Accounting and Economics, 17 (1-2), 41-67.

Lambert, R., Leuz, C., & Verrecchia, R. E. (2007). Accounting information, disclosure, and the cost of capital. Journal of Accounting Research, 45 (2), 385-420.

Lang, M. H., & Lundholm, R. J. (1993). Cross-sectional determinants of analyst ratings of corporate disclosures. Journal of Accounting Research, 31 (2), 246-271.

Leuz, C. (2007). Was the Sarbanes-Oxley Act of 2002 really this costly? A discussion of evidence from event returns and going-private decisions. Journal of Accounting and Economics, 44 (1-2), 146-165.

Leuz, C., & Verrecchia, R. E. (2000). The economic consequences of increased disclosure. Journal of Accounting Research, 38, 91-124.

Leuz, C., & Wysocki, P. D. (2016). The economics of disclosure and financial reporting regulation: Evidence and suggestions for future research. Journal of Accounting Research, 54 (2), 525-622.

Miller, G. S. (2002). Earnings performance and discretionary disclosure. Journal of Accounting Research, 40 (1), 173-204.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. Journal of Financial Economics, 13 (2), 187-221.

Rogers, J. L., & Stocken, P. C. (2005). Credibility of management forecasts. The Accounting Review, 80 (4), 1233-1260.

Ross, S. A. (1977). The determination of financial structure: The incentive-signalling approach. The Bell Journal of Economics, 8 (1), 23-40.

Skinner, D. J. (1994). Why firms voluntarily disclose bad news. Journal of Accounting Research, 32 (1), 38-60.

Spence, M. (1973). Job market signaling. The Quarterly Journal of Economics, 87 (3), 355-374.

Verrecchia, R. E. (1983). Discretionary disclosure. Journal of Accounting and Economics, 5, 179-194.

Wagenhofer, A. (1990). Voluntary disclosure with a strategic opponent. Journal of Accounting and Economics, 12 (4), 341-363.

Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	16,882	0.6006	0.8947	0.0000	0.0000	1.6094
Treatment Effect	16,882	0.5816	0.4933	0.0000	1.0000	1.0000
Institutional ownership	16,882	0.5693	0.3181	0.2894	0.6178	0.8399
Firm size	16,882	5.9867	2.0604	4.4840	5.9405	7.3840
Book-to-market	16,882	0.6628	0.6480	0.2937	0.5306	0.8603
ROA	16,882	-0.0443	0.2563	-0.0330	0.0211	0.0666
Stock return	16,882	-0.0180	0.4940	-0.3085	-0.1019	0.1465
Earnings volatility	16,882	0.1467	0.2842	0.0233	0.0568	0.1477
Loss	16,882	0.3348	0.4719	0.0000	0.0000	1.0000
Class action litigation risk	16,882	0.3171	0.2891	0.0889	0.2078	0.4755
Time Trend	16,882	1.9297	1.4063	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
Securities Industry Act Trinidad and Tobago 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	**-0.05**	-0.01	**-0.07**	**0.20**	**-0.05**	0.00	**-0.02**	**0.10**	**0.27**
FreqMF	**-0.05**	1.00	**0.43**	**0.44**	**-0.15**	**0.23**	-0.01	**-0.15**	**-0.27**	-0.01
Institutional ownership	-0.01	**0.43**	1.00	**0.63**	**-0.15**	**0.28**	**-0.10**	**-0.22**	**-0.23**	**0.06**
Firm size	**-0.07**	**0.44**	**0.63**	1.00	**-0.35**	**0.36**	**0.03**	**-0.25**	**-0.40**	**0.12**
Book-to-market	**0.20**	**-0.15**	**-0.15**	**-0.35**	1.00	**0.04**	**-0.21**	**-0.13**	**0.14**	**-0.08**
ROA	**-0.05**	**0.23**	**0.28**	**0.36**	**0.04**	1.00	**0.12**	**-0.54**	**-0.59**	**-0.08**
Stock return	0.00	-0.01	**-0.10**	**0.03**	**-0.21**	**0.12**	1.00	0.01	**-0.14**	**0.04**
Earnings volatility	**-0.02**	**-0.15**	**-0.22**	**-0.25**	**-0.13**	**-0.54**	0.01	1.00	**0.33**	**0.13**
Loss	**0.10**	**-0.27**	**-0.23**	**-0.40**	**0.14**	**-0.59**	**-0.14**	**0.33**	1.00	**0.14**
Class action litigation risk	**0.27**	-0.01	**0.06**	**0.12**	**-0.08**	**-0.08**	**0.04**	**0.13**	**0.14**	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 Securities Industry Act Trinidad and Tobago on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	-0.0830*** (8.40)	0.0079 (0.55)	-0.0248** (1.98)
Institutional ownership		0.7140*** (15.02)	0.0574 (1.10)
Firm size		0.1024*** (11.01)	0.0918*** (8.27)
Book-to-market		-0.0307** (2.31)	0.0039 (0.38)
ROA		0.0452 (1.40)	0.0405* (1.90)
Stock return		-0.0236** (2.19)	-0.0344*** (4.33)
Earnings volatility		0.0288 (0.90)	-0.0092 (0.24)
Loss		-0.1942*** (9.93)	-0.0730*** (6.33)
Class action litigation risk		-0.1331*** (4.70)	-0.0052 (0.33)
Time Trend		-0.0033 (0.62)	-0.0140*** (3.27)
Firm fixed effects	No	No	Yes
N	16,882	16,882	16,882
R^2	0.0021	0.2465	0.8751

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