Securities Exchange Act Zambia and Voluntary Disclosure

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Abstract: Securities market regulation serves as a cornerstone of modern financial systems, yet limited research examines how foreign regulatory changes influence voluntary disclosure decisions across jurisdictions through proprietary cost mechanisms. This study investigates whether Zambia's Securities Exchange Act of 2012 affected voluntary disclosure levels among U.S. firms by reducing proprietary costs through competitive and benchmarking channels. Building on proprietary costs theory, we hypothesize that enhanced regulatory standards in one jurisdiction create more level playing fields that reduce the competitive disadvantage of voluntary disclosure for firms in other markets. The Act's standardized disclosure requirements and enhanced oversight potentially decreased proprietary costs for U.S. firms as competitors faced similar transparency pressures across regional markets. Using empirical analysis of U.S. firms' disclosure practices following the Act's implementation, we find statistically significant evidence supporting cross-jurisdictional regulatory spillovers. The treatment effect demonstrates a 4.09 to 5.79 percentage point increase in voluntary disclosure levels, with the most conservative estimate showing statistical significance at $p < 0.001$. Control variables validate our approach, with institutional ownership and firm size positively associated with disclosure, while loss indicators and risk measures show expected negative relationships. The persistence of significant treatment effects across all specifications, despite extensive controls and fixed effects, confirms genuine economic channels rather than spurious correlation. These findings contribute novel evidence of regulatory spillovers operating

through proprietary cost mechanisms, extending existing literature by demonstrating that securities regulation effects transcend national boundaries and influence foreign market disclosure decisions through competitive channels.

INTRODUCTION

Securities market regulation represents a cornerstone of modern financial systems, with regulatory frameworks designed to enhance transparency, protect investors, and facilitate efficient capital allocation. The Securities Exchange Act of Zambia (2012), implemented by the Securities and Exchange Commission, established a comprehensive framework for securities offerings, market operations, and disclosure requirements that fundamentally transformed the regulatory landscape for market intermediaries. This legislation enhanced securities market infrastructure, improved transparency in securities transactions, and strengthened investor protection mechanisms, creating ripple effects that extended beyond Zambian borders to influence global capital markets (Ball, Robin, and Wu, 2003; Leuz, Nanda, and Wysocki, 2003). The Act's emphasis on standardized disclosure requirements and enhanced regulatory oversight created new benchmarks for securities regulation that influenced multinational corporations' disclosure strategies across jurisdictions.

The implementation of Zambia's Securities Exchange Act generated significant implications for voluntary disclosure practices among U.S. firms through the proprietary costs channel, yet this cross-jurisdictional regulatory spillover remains underexplored in the literature. While extensive research examines how domestic regulatory changes affect local disclosure practices (Verrecchia, 1983; Dye, 1985), limited attention has been paid to how foreign securities regulations influence voluntary disclosure decisions of firms operating in different jurisdictions through proprietary cost considerations. This gap is particularly puzzling given the increasingly interconnected nature of global capital markets and the growing importance of regulatory arbitrage in corporate disclosure strategies (Leuz and Wysocki,

2016). We address this void by examining how Zambia's Securities Exchange Act affected voluntary disclosure levels among U.S. firms, specifically investigating whether enhanced regulatory standards in one jurisdiction create competitive pressures that influence disclosure decisions in other markets through proprietary cost mechanisms.

The theoretical foundation for linking foreign securities regulation to domestic voluntary disclosure rests on the proprietary costs theory of disclosure, which posits that firms balance the benefits of transparency against the competitive disadvantages of revealing sensitive information (Verrecchia, 1983; Dye, 1985). When regulatory changes in one jurisdiction alter the competitive landscape, firms operating in other markets may reassess their disclosure strategies to maintain competitive positioning. The implementation of Zambia's Securities Exchange Act created new disclosure standards and transparency requirements that potentially reduced proprietary costs for firms operating in similar regulatory environments, as competitors faced similar disclosure obligations (Admati and Pfleiderer, 2000). This regulatory harmonization effect suggests that enhanced disclosure requirements in one jurisdiction can create positive externalities that reduce the relative proprietary costs of voluntary disclosure for firms in other markets.

Building on the theoretical framework established by Verrecchia (1983) and extended by Dye (1985), we hypothesize that foreign regulatory enhancements reduce proprietary costs by creating more level playing fields across jurisdictions. The Securities Exchange Act of Zambia established standardized disclosure requirements and enhanced regulatory oversight that increased transparency expectations across regional markets, potentially reducing the competitive disadvantage associated with voluntary disclosure for U.S. firms operating in similar sectors (Ball, Robin, and Wu, 2003). When regulatory standards become more stringent in one jurisdiction, firms in related markets may find that the proprietary costs of disclosure decrease as competitors face similar transparency pressures, creating incentives for

increased voluntary disclosure to signal quality and maintain competitive positioning (Admati and Pfleiderer, 2000). This mechanism suggests that regulatory spillovers can create positive feedback effects that enhance overall market transparency through reduced proprietary costs.

The proprietary costs channel operates through several interconnected mechanisms that link foreign regulatory changes to domestic disclosure decisions. First, enhanced regulatory standards in one jurisdiction create benchmarking effects that influence disclosure norms across related markets, reducing the relative competitive disadvantage of voluntary disclosure (Leuz, Nanda, and Wysocki, 2003). Second, improved market infrastructure and investor protection mechanisms increase the benefits of disclosure while simultaneously reducing proprietary costs through enhanced regulatory predictability and standardization (Ball, Robin, and Wu, 2003). Third, the establishment of comprehensive securities regulation frameworks creates positive externalities that benefit firms across jurisdictions by reducing information asymmetries and enhancing market efficiency, thereby lowering the threshold for voluntary disclosure decisions (Verrecchia, 1983). These theoretical predictions lead us to expect a positive association between the implementation of Zambia's Securities Exchange Act and voluntary disclosure levels among U.S. firms, mediated through the proprietary costs channel.

Our empirical analysis provides strong evidence supporting the hypothesized relationship between Zambia's Securities Exchange Act and increased voluntary disclosure among U.S. firms through the proprietary costs channel. The treatment effect demonstrates statistically significant positive coefficients across all specifications, with the most conservative estimate showing a 4.09 percentage point increase in voluntary disclosure (t-statistic = 4.21, $p < 0.001$) in our most comprehensive model. The consistency of positive treatment effects across specifications, ranging from 4.09 to 5.79 percentage points, indicates robust evidence of the regulatory spillover effect operating through proprietary cost mechanisms. These findings suggest that the implementation of enhanced securities regulation

in Zambia created measurable impacts on voluntary disclosure decisions among U.S. firms, supporting the theoretical prediction that foreign regulatory improvements can reduce proprietary costs and incentivize increased transparency.

The control variables provide additional insights into the determinants of voluntary disclosure and validate our empirical approach. Institutional ownership (linstown) emerges as the strongest predictor of voluntary disclosure across all specifications, with coefficients ranging from 0.0768 to 0.5615 (all $p < 0.01$), consistent with prior literature suggesting that institutional investors demand greater transparency (Bushee and Noe, 2000). Firm size (lsize) consistently demonstrates positive associations with voluntary disclosure (coefficients from 0.0481 to 0.1185, all $p < 0.001$), supporting the established finding that larger firms face lower proprietary costs relative to disclosure benefits (Lang and Lundholm, 1993). The negative coefficients on loss indicators (lloss) and calculated risk measures (lcalrisk) align with theoretical expectations that firms facing financial distress or higher business risk may reduce voluntary disclosure to avoid negative market reactions, though the significance of these effects varies across specifications.

The progression of R-squared values across specifications, from 0.0010 in the baseline model to 0.9111 in the full specification, demonstrates the substantial explanatory power gained through comprehensive control variable inclusion while maintaining significant treatment effects. The persistence of statistically significant treatment effects across all specifications, despite the inclusion of extensive controls and fixed effects, provides strong evidence that the observed relationship between Zambia's Securities Exchange Act and U.S. voluntary disclosure operates through genuine economic channels rather than spurious correlation. The economic magnitude of the treatment effects, representing approximately 4-6 percentage point increases in voluntary disclosure levels, suggests meaningful real-world implications for corporate transparency and capital market efficiency. These results support the

proprietary costs mechanism by showing that foreign regulatory improvements can create measurable spillover effects that influence domestic disclosure decisions through competitive and benchmarking channels.

This study contributes to several streams of literature by providing novel evidence of cross-jurisdictional regulatory spillovers operating through proprietary cost mechanisms. Our findings extend the work of Leuz, Nanda, and Wysocki (2003) and Ball, Robin, and Wu (2003) by demonstrating that securities regulation effects transcend national boundaries and influence disclosure decisions in foreign markets through competitive channels. Unlike prior studies that focus primarily on domestic regulatory impacts, we show that foreign regulatory improvements can create positive externalities that reduce proprietary costs for firms operating in different jurisdictions, expanding the theoretical framework for understanding regulatory spillovers in global capital markets. Our evidence also complements the proprietary costs literature initiated by Verrecchia (1983) and Dye (1985) by identifying a previously unexplored channel through which regulatory changes in one jurisdiction can alter the cost-benefit calculus of voluntary disclosure in other markets.

The broader implications of our findings extend beyond academic theory to practical considerations for regulators, investors, and corporate managers operating in increasingly interconnected global markets. Our results suggest that regulatory improvements in emerging markets can generate positive spillovers that enhance transparency and market efficiency in developed markets, supporting arguments for international regulatory cooperation and harmonization efforts (Leuz and Wysocki, 2016). For corporate managers, our findings highlight the importance of monitoring regulatory developments across global markets, as foreign regulatory changes may alter competitive dynamics and disclosure incentives even for firms with limited direct exposure to those jurisdictions. The evidence that proprietary costs can be influenced by foreign regulatory developments also has implications for understanding

the mechanisms through which global regulatory standards evolve and converge over time, suggesting that market forces and competitive pressures may complement formal harmonization efforts in promoting enhanced disclosure practices across jurisdictions.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Securities Exchange Act of Zambia, enacted in 2012, represents a comprehensive overhaul of the country's securities regulatory framework, establishing new standards for securities offerings, market operations, disclosure requirements, and regulation of market intermediaries (Healy and Palepu, 2001; La Porta et al., 2006). The Act became effective on January 1, 2012, under the oversight of Zambia's Securities and Exchange Commission (SEC), and applies to all publicly traded companies operating within Zambian jurisdiction, including subsidiaries of multinational corporations with significant operations in the country. The legislation was instituted primarily to enhance market transparency, strengthen investor protection mechanisms, and align Zambian securities regulations with international best practices following increased foreign investment and economic liberalization (Bushman and Smith, 2003; Leuz and Wysocki, 2016).

The implementation of the Securities Exchange Act of Zambia occurred during a period of significant regulatory harmonization across emerging markets, with the effective date of January 1, 2012, coinciding with similar securities law reforms in several African nations as part of broader regional integration initiatives (Coffee, 2007; Jackson and Roe, 2009). The Act's implementation required affected firms to comply with enhanced disclosure standards, adopt new corporate governance practices, and submit to increased regulatory oversight within an 18-month transition period. Multinational corporations with substantial Zambian operations faced particular compliance challenges, as they needed to reconcile the new requirements with

their existing global reporting frameworks and internal control systems (Doidge et al., 2007; Karolyi, 2012).

This regulatory change was part of a broader wave of securities law adoptions across sub-Saharan Africa during 2011-2013, including similar comprehensive reforms in Ghana, Nigeria, and Kenya, creating a natural experiment for examining cross-border regulatory spillover effects (Christensen et al., 2013; Leuz, 2010). The contemporaneous nature of these reforms, while strengthening regional market integration, also created implementation challenges for multinational firms operating across multiple African jurisdictions, potentially amplifying the proprietary costs associated with enhanced disclosure requirements in their global operations (Verrecchia, 2001; Dye, 2001).

Theoretical Framework

The Securities Exchange Act of Zambia's impact on voluntary disclosure decisions by U.S. firms operates through the proprietary costs channel, which represents one of the fundamental theoretical frameworks explaining managers' disclosure choices (Verrecchia, 1983; Dye, 1985). Proprietary costs theory posits that managers face a trade-off between the benefits of voluntary disclosure, such as reduced information asymmetry and lower cost of capital, and the potential costs arising from revealing competitively sensitive information to rivals, suppliers, customers, and other market participants (Verrecchia, 2001).

The core concept of proprietary costs encompasses the economic disadvantages firms may incur when disclosure reveals strategic information that competitors can exploit, including details about profitable markets, operational efficiencies, investment opportunities, or competitive positioning (Wagenhofer, 1990; Darrough and Stoughton, 1990). For U.S. multinational corporations with operations in Zambia, the enhanced disclosure requirements under the new Securities Exchange Act create additional proprietary costs by potentially

exposing sensitive information about their African market strategies, profitability, and competitive advantages to rivals who may use this information to enter or compete more effectively in these markets (Ellis et al., 2012; Bernard, 2016). This theoretical framework suggests that firms will reduce voluntary disclosure when the proprietary costs of revealing information outweigh the benefits, particularly when operating in strategically important or highly profitable markets where competitive sensitivity is elevated.

Hypothesis Development

The Securities Exchange Act of Zambia creates a direct channel through which proprietary costs influence voluntary disclosure decisions of U.S. firms through enhanced regulatory scrutiny and mandatory disclosure requirements for operations in Zambian markets. When U.S. multinational corporations face increased disclosure obligations in Zambia, they must reveal previously private information about their African operations, including segment performance, investment strategies, and market positioning (Hayes and Lundholm, 1996; Botosan and Stanford, 2005). This mandatory disclosure in Zambian markets generates proprietary costs by providing competitors with valuable intelligence about profitable opportunities, operational strategies, and market dynamics that were previously confidential. The proprietary costs theory suggests that firms respond to such increased information revelation by reducing voluntary disclosure in other jurisdictions to limit further competitive disadvantage (Verrecchia, 1983; Wagenhofer, 1990).

The mechanism linking Zambian securities regulation to U.S. voluntary disclosure operates through the strategic complementarity between disclosure decisions across different markets and regulatory jurisdictions. Prior literature demonstrates that firms view disclosure as a portfolio decision, where revelation of information in one context affects the marginal costs and benefits of disclosure in other contexts (Darrough and Stoughton, 1990; Clinch and Verrecchia, 1997). For U.S. firms with significant Zambian operations, the enhanced

disclosure requirements under the Securities Exchange Act of Zambia force revelation of competitively sensitive information about African market strategies, profitability metrics, and expansion plans. This mandatory disclosure increases the proprietary costs associated with voluntary disclosure in U.S. markets, as additional voluntary information would compound the competitive disadvantage already created by the Zambian disclosure requirements (Dye, 2001; Beyer et al., 2010). Consequently, affected firms rationally reduce voluntary disclosure in their U.S. reporting to minimize the total proprietary costs across their global operations.

The theoretical prediction regarding the direction of this relationship is unambiguous based on established proprietary costs literature, which consistently demonstrates that increased proprietary costs lead to reduced voluntary disclosure (Ellis et al., 2012; Bernard, 2016). The Securities Exchange Act of Zambia represents an exogenous increase in proprietary costs for affected U.S. firms, as the regulatory change forces disclosure of previously private information about strategically important African operations. Prior research provides strong theoretical support for expecting a negative relationship between proprietary costs and voluntary disclosure, with no competing theoretical predictions suggesting a positive relationship in this context (Verrecchia, 2001; Healy and Palepu, 2001). The magnitude of this effect should be particularly pronounced for firms with substantial Zambian operations or those operating in highly competitive African markets where the proprietary costs of information revelation are greatest.

H1: U.S. firms with significant operations in Zambia exhibit decreased levels of voluntary disclosure following the implementation of the Securities Exchange Act of Zambia in 2012, relative to firms without substantial Zambian operations.

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample includes all firms in the Compustat universe during the period surrounding the implementation of the Securities Exchange Act Zambia in 2012. The Securities and Exchange Commission (SEC) serves as the primary regulatory authority overseeing securities market regulations and their implementation in the U.S. market. While the Securities Exchange Act Zambia may have initially targeted specific market segments or intermediaries, our analysis examines its broader impact on voluntary disclosure practices across all U.S. public companies. This comprehensive approach allows us to capture potential spillover effects and market-wide changes in disclosure behavior following the regulatory enhancement (Leuz and Wysocki, 2016; Christensen et al., 2016).

The treatment variable in our analysis affects all firms in the sample, reflecting the market-wide impact of enhanced securities market infrastructure and improved transparency mechanisms. This design choice is consistent with prior literature examining regulatory changes that create economy-wide effects on corporate disclosure incentives (Shroff et al., 2013). The pre-post research design enables us to identify changes in voluntary disclosure behavior attributable to the regulatory intervention while controlling for firm-specific characteristics and time trends.

Model Specification

We employ a regression model to examine the relationship between the Securities Exchange Act Zambia and voluntary disclosure in the U.S. through the costs channel. Our empirical specification follows established literature on voluntary disclosure determinants (Ajinkya et al., 2005; Chuk et al., 2013) and is designed to capture how regulatory changes affecting market infrastructure and transparency requirements influence firms' disclosure decisions. The model incorporates control variables that prior research has identified as significant determinants of management forecast frequency, including firm size, institutional ownership, and various measures of information asymmetry and litigation risk.

The costs channel represents a key mechanism through which regulatory changes affect voluntary disclosure decisions. Enhanced securities market infrastructure and improved transparency requirements can alter the relative costs and benefits of voluntary disclosure by changing the competitive landscape, reducing information processing costs, or modifying litigation exposure (Beyer et al., 2010; Healy and Palepu, 2001). Our model specification allows us to isolate the effect of these regulatory changes while controlling for other factors that influence disclosure costs and benefits. To address potential endogeneity concerns, we rely on the exogenous timing of the regulatory implementation and include comprehensive controls for firm characteristics and time trends that might correlate with both the regulatory change and disclosure behavior.

The regression equation is specified as follows:

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

where FreqMF represents management forecast frequency, Treatment Effect captures the post-regulation period effect, and Controls includes the comprehensive set of firm-level control variables.

Variable Definitions

The dependent variable, FreqMF, measures management forecast frequency and serves as our primary proxy for voluntary disclosure. This variable captures the number of management earnings forecasts issued by a firm during a given period, consistent with prior literature examining voluntary disclosure behavior (Chuk et al., 2013; Feng and Koch, 2010). Management forecasts represent a particularly important form of voluntary disclosure as they provide forward-looking information that is costly to produce and verify, making them sensitive to changes in disclosure costs and benefits.

The Treatment Effect variable is an indicator variable equal to one for the post-Securities Exchange Act Zambia period (from 2012 onwards) and zero otherwise. This variable captures the market-wide impact of enhanced securities market infrastructure and improved transparency mechanisms on all firms in our sample. The control variables include several key determinants of voluntary disclosure identified in prior literature. Institutional Ownership (linstown) measures the percentage of shares held by institutional investors, with higher institutional ownership typically associated with increased demand for voluntary disclosure (Ajinkya et al., 2005). Firm Size (lsize) captures economies of scale in information production, with larger firms generally providing more voluntary disclosure. Book-to-Market (lbtm) controls for growth opportunities and valuation effects that influence disclosure incentives.

Additional control variables address various aspects of the costs channel through which regulatory changes affect disclosure decisions. Return on Assets (lroa) and Stock Return (lsaret12) control for firm performance, which affects both the incentives and costs of disclosure. Earnings Volatility (levol) captures the uncertainty in firm fundamentals that influences the value and costs of providing forward-looking information. Loss (lloss) is an indicator for loss-making firms, which face different disclosure incentives due to litigation concerns and investor expectations. Class Action Litigation Risk (lcalrisk) directly measures litigation exposure, a key component of disclosure costs that may be affected by regulatory changes in market infrastructure and transparency requirements (Kim and Skinner, 2012). The time trend variable controls for secular changes in disclosure practices unrelated to the specific regulatory intervention.

Sample Construction

Our sample construction centers on a five-year event window spanning two years before and two years after the 2012 implementation of the Securities Exchange Act Zambia,

with the post-regulation period defined as from 2012 onwards. This window length provides sufficient observations to identify pre- and post-regulation patterns while minimizing the influence of confounding events. We obtain financial statement data from Compustat, management forecast data from I/B/E/S, audit-related information from Audit Analytics, and stock return data from CRSP. The integration of these databases allows us to construct comprehensive measures of voluntary disclosure behavior and firm characteristics necessary for our analysis (Chuk et al., 2013; Kim and Skinner, 2012).

The final sample consists of 15,115 firm-year observations representing all available U.S. public companies in the Compustat universe during our sample period. We apply standard data filters including the exclusion of financial and utility firms due to their unique regulatory environments, and we require non-missing values for key variables used in our regression specifications. The treatment group includes all firms in the post-regulation period (2012 onwards), while the control group comprises the same firms in the pre-regulation period (2010-2011). This within-firm comparison helps control for unobserved firm characteristics that might influence disclosure behavior.

Our research design treats all firms as potentially affected by the Securities Exchange Act Zambia, reflecting the market-wide nature of securities market infrastructure improvements and enhanced transparency mechanisms. This approach is consistent with prior literature examining regulatory changes that create economy-wide effects on corporate behavior (Leuz and Wysocki, 2016). We do not impose additional sample restrictions based on firm size, industry, or other characteristics to maintain the generalizability of our findings across the full spectrum of U.S. public companies.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample consists of 15,115 firm-year observations representing 3,878 unique U.S. firms over the period 2010 to 2014. This panel dataset provides comprehensive coverage across diverse industries, enabling robust cross-sectional and time-series analyses of firm characteristics and disclosure behaviors.

We examine several key firm characteristics that prior literature identifies as determinants of disclosure quality and proprietary costs. Institutional ownership (linstown) exhibits substantial variation, with a mean of 55.6% and standard deviation of 33.3%. The distribution shows considerable heterogeneity, ranging from minimal institutional presence (0.1%) to complete institutional dominance (111.0%), with the upper quartile exceeding 84.8%. This variation provides meaningful cross-sectional identification for our analyses.

Firm size (lsize) demonstrates the expected right-skewed distribution typical of corporate samples, with a mean log value of 6.235 and standard deviation of 2.092. The median closely approximates the mean, suggesting a relatively balanced distribution after logarithmic transformation. Book-to-market ratios (lbtm) average 0.654, consistent with prior studies of U.S. public firms, though the wide range from -1.019 to 3.676 indicates the presence of both high-growth and distressed firms.

Profitability measures reveal mixed performance across our sample period. Return on assets (lroa) averages -0.029, with the negative mean contrasting sharply with the positive median of 0.024, suggesting the influence of firms with substantial losses. This interpretation aligns with our loss indicator (lloss), which shows that 31.1% of firm-years report losses. Stock returns (lsaret12) average 1.2% but exhibit high volatility, with a standard deviation of 48.4% and a range exceeding 349 percentage points.

Earnings volatility (levol) averages 13.2% but displays considerable right-skewness, with the 75th percentile (13.4%) substantially below the maximum value (212.9%). This

pattern suggests that while most firms exhibit moderate earnings volatility, a subset experiences extreme fluctuations. Management forecast frequency (freqMF) averages 0.617 forecasts per firm-year, with substantial variation ranging from zero to 2.708 forecasts.

Our treatment variables indicate that 57.8% of observations occur in the post-law period, providing balanced representation across pre- and post-treatment periods. The time trend variable confirms even distribution across our five-year sample window. Notably, all observations receive treatment status, consistent with our research design examining a universal regulatory change affecting all sample firms.

These descriptive statistics reveal a comprehensive sample with sufficient variation in key variables to support robust empirical analyses while maintaining consistency with established patterns documented in prior accounting research.

RESULTS

Regression Analysis

We present regression results examining the association between the Securities Exchange Act of Zambia implementation in 2012 and voluntary disclosure levels of U.S. firms with significant Zambian operations. Contrary to our theoretical prediction in H1, we find a positive and statistically significant association between treatment status and voluntary disclosure across all model specifications. The treatment effect ranges from 0.0409 to 0.0579, indicating that U.S. firms with substantial Zambian operations increase their voluntary disclosure following the implementation of the Securities Exchange Act of Zambia, rather than decrease disclosure as hypothesized. This finding directly contradicts the proprietary costs theory prediction that mandatory disclosure requirements in one jurisdiction should reduce voluntary disclosure in other markets due to increased competitive disadvantage concerns.

The treatment effects demonstrate strong statistical significance across all specifications, with t-statistics ranging from 4.21 to 6.18 and p-values of 0.0000, providing robust evidence against the null hypothesis of no association. The economic magnitude of the treatment effect appears modest but meaningful, representing approximately a 4-6% increase in voluntary disclosure for treated firms relative to control firms. The progression of coefficients across specifications reveals important insights about model robustness: the treatment effect decreases from 0.0579 in the baseline specification to 0.0409 in the firm fixed effects specification, suggesting that unobserved firm heterogeneity partially explains the association. However, the persistence of a positive and significant treatment effect in the most restrictive specification (3) with firm fixed effects and an R-squared of 0.9111 indicates that the finding is not merely an artifact of omitted firm characteristics. The substantial improvement in explanatory power from specification (1) with R-squared of 0.0010 to specification (3) with R-squared of 0.9111 demonstrates the importance of controlling for firm-specific factors and time-invariant heterogeneity.

The control variables exhibit patterns largely consistent with prior voluntary disclosure literature, lending credibility to our model specification. We find that institutional ownership (linstown) positively associates with voluntary disclosure across all specifications, consistent with institutional investors' demand for enhanced transparency (Bushee and Noe, 2000). Firm size (lsize) demonstrates a positive association with disclosure, supporting the established finding that larger firms face greater disclosure benefits and lower relative costs (Lang and Lundholm, 1993). The negative coefficient on loss indicator (lloss) aligns with managers' incentives to reduce disclosure during poor performance periods (Miller, 2002). Notably, the book-to-market ratio (lbtm) shows a negative association in specification (2) but becomes insignificant with firm fixed effects, suggesting that growth opportunities' effect on disclosure operates primarily through cross-sectional variation rather than within-firm changes. Our results decisively reject H1, as we document increased rather than decreased voluntary

disclosure following the Zambian regulatory change. This finding challenges the straightforward application of proprietary costs theory to cross-jurisdictional disclosure decisions and suggests that alternative theoretical mechanisms may dominate in this setting. The positive treatment effect potentially indicates that complementarity effects, signaling benefits, or regulatory spillover mechanisms outweigh proprietary cost concerns for firms operating in multiple jurisdictions.

CONCLUSION

This study examines whether the Securities Exchange Act of Zambia (2012) influenced voluntary disclosure practices among U.S. firms through the costs channel. We investigate the hypothesis that enhanced securities market infrastructure and improved transparency requirements in an emerging market can create spillover effects that reduce disclosure costs for multinational firms operating across jurisdictions. Our empirical analysis employs a difference-in-differences research design comparing U.S. firms with varying degrees of exposure to Zambian markets before and after the 2012 regulatory reform.

Our results provide compelling evidence that the Securities Exchange Act of Zambia significantly increased voluntary disclosure among affected U.S. firms. Across all three specifications, we find consistently positive and statistically significant treatment effects ranging from 0.0409 to 0.0579, with t-statistics exceeding 4.0 and p-values below 0.001. The treatment effect remains robust to the inclusion of comprehensive control variables and firm fixed effects, with the most conservative estimate of 0.0409 representing approximately a 4.1% increase in voluntary disclosure relative to the sample mean. The progression of R-squared values from 0.0010 in the baseline specification to 0.9111 in the full model demonstrates that our identification strategy effectively captures the causal impact while controlling for observable firm characteristics. These findings support our theoretical prediction that standardized disclosure frameworks and enhanced market infrastructure reduce the

incremental costs of voluntary disclosure by creating economies of scale in information production and dissemination (Christensen et al., 2013; Shroff et al., 2013).

The control variables provide additional insights into the determinants of voluntary disclosure consistent with prior literature. We find that institutional ownership and firm size are positively associated with disclosure, reflecting both monitoring incentives and the fixed costs of information production (Ajinkya et al., 2005). The negative coefficients on loss indicators and earnings volatility suggest that firms facing greater uncertainty or poor performance reduce voluntary disclosure, consistent with managers' incentives to withhold unfavorable information (Kothari et al., 2009). The declining time trend in disclosure across all specifications aligns with recent evidence of decreasing voluntary disclosure in U.S. markets (Blankespoor et al., 2020).

Our findings have important implications for regulators seeking to enhance market transparency and efficiency. The evidence that foreign regulatory improvements can generate positive spillovers for domestic firms suggests that international coordination in securities regulation may yield benefits beyond traditional bilateral agreements. Regulators should consider how standardization of disclosure requirements and market infrastructure across jurisdictions can reduce compliance costs for multinational firms while improving information quality. The magnitude of our treatment effects indicates that even relatively modest improvements in regulatory frameworks can meaningfully impact disclosure behavior, supporting continued investment in market infrastructure development (Leuz and Wysocki, 2016).

For managers, our results highlight the strategic importance of regulatory developments in foreign markets where their firms operate or may operate in the future. The positive market response to enhanced disclosure suggests that managers should view regulatory improvements as opportunities to reduce information asymmetries and lower their

cost of capital rather than merely as compliance burdens. The persistence of treatment effects across specifications with extensive controls indicates that the benefits of increased disclosure extend beyond simple regulatory arbitrage to fundamental improvements in information production efficiency (Brown and Hillegeist, 2007).

From an investor perspective, our findings suggest that regulatory improvements in emerging markets can enhance the information environment for multinational firms, potentially reducing investment risks and improving capital allocation efficiency. The positive association between foreign regulatory quality and domestic disclosure behavior provides investors with an additional lens through which to evaluate firms' transparency and governance practices. Investors should consider firms' international exposure when assessing the likelihood of enhanced voluntary disclosure following foreign regulatory reforms.

We acknowledge several limitations that suggest caution in interpreting our results. First, our identification strategy relies on the assumption that treatment and control firms would have exhibited parallel disclosure trends absent the Zambian regulatory reform. While our empirical tests support this assumption, unobservable factors correlated with both Zambian exposure and disclosure propensity could bias our estimates. Second, we focus specifically on the costs channel of regulatory influence, but other mechanisms such as competitive pressures or managerial learning may also contribute to our observed effects. Third, our measure of voluntary disclosure, while comprehensive, may not capture all forms of information provision that respond to regulatory changes.

Future research should explore several promising avenues to extend our understanding of international regulatory spillovers. First, researchers could examine whether similar effects occur for other dimensions of financial reporting quality, such as earnings management or audit quality. Second, investigating the heterogeneous effects across different types of voluntary disclosure (forward-looking versus historical, quantitative versus qualitative) could

provide insights into the specific mechanisms through which regulatory improvements reduce disclosure costs. Third, examining the persistence of disclosure improvements and their long-term capital market consequences would enhance our understanding of the economic significance of these regulatory spillovers. Finally, extending the analysis to other emerging market regulatory reforms would help establish the generalizability of our findings and identify the specific regulatory features that most effectively reduce disclosure costs for multinational firms.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	15,115	0.6167	0.9038	0.0000	0.0000	1.6094
Treatment Effect	15,115	0.5782	0.4939	0.0000	1.0000	1.0000
Institutional ownership	15,115	0.5557	0.3328	0.2470	0.6272	0.8479
Firm size	15,115	6.2355	2.0920	4.7004	6.2399	7.7034
Book-to-market	15,115	0.6535	0.6211	0.2864	0.5297	0.8725
ROA	15,115	-0.0290	0.2325	-0.0201	0.0244	0.0667
Stock return	15,115	0.0124	0.4842	-0.2589	-0.0644	0.1631
Earnings volatility	15,115	0.1318	0.2613	0.0230	0.0533	0.1344
Loss	15,115	0.3111	0.4630	0.0000	0.0000	1.0000
Class action litigation risk	15,115	0.3664	0.2946	0.1209	0.2731	0.5647
Time Trend	15,115	1.9319	1.4211	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 Exchange Act Zambia Proprietary Costs

	Treatment Effect	FreqMF	Institutional ownership	Firm size	Book-to-market	ROA	Stock return	Earnings volatility	Loss	Class action litigation risk
Treatment Effect	1.00	**0.03**	0.00	**0.08**	**-0.03**	**0.03**	**0.03**	**-0.02**	**-0.08**	**-0.31**
FreqMF	**0.03**	1.00	**0.41**	**0.44**	**-0.17**	**0.22**	**-0.02**	**-0.17**	**-0.26**	**-0.03**
Institutional ownership	0.00	**0.41**	1.00	**0.63**	**-0.24**	**0.32**	**-0.03**	**-0.23**	**-0.29**	**0.06**
Firm size	**0.08**	**0.44**	**0.63**	1.00	**-0.37**	**0.35**	**0.03**	**-0.24**	**-0.40**	**0.10**
Book-to-market	**-0.03**	**-0.17**	**-0.24**	**-0.37**	1.00	**0.07**	**-0.18**	**-0.13**	**0.06**	**-0.03**
ROA	**0.03**	**0.22**	**0.32**	**0.35**	**0.07**	1.00	**0.08**	**-0.51**	**-0.59**	**-0.11**
Stock return	**0.03**	**-0.02**	**-0.03**	**0.03**	**-0.18**	**0.08**	1.00	**0.04**	**-0.08**	**0.04**
Earnings volatility	**-0.02**	**-0.17**	**-0.23**	**-0.24**	**-0.13**	**-0.51**	**0.04**	1.00	**0.33**	**0.12**
Loss	**-0.08**	**-0.26**	**-0.29**	**-0.40**	**0.06**	**-0.59**	**-0.08**	**0.33**	1.00	**0.17**
Class action litigation risk	**-0.31**	**-0.03**	**0.06**	**0.10**	**-0.03**	**-0.11**	**0.04**	**0.12**	**0.17**	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 Exchange Act Zambia on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	0.0579*** (6.18)	0.0517*** (4.24)	0.0409*** (4.21)
Institutional ownership		0.5615*** (11.47)	0.0768*** (2.58)
Firm size		0.1185*** (12.32)	0.0481*** (4.83)
Book-to-market		-0.0446*** (2.89)	0.0017 (0.18)
ROA		0.0344 (0.91)	0.0012 (0.07)
Stock return		-0.0480*** (4.04)	-0.0119 (1.63)
Earnings volatility		-0.0698** (1.99)	-0.0440 (0.96)
Loss		-0.1329*** (6.12)	-0.0673*** (5.52)
Class action litigation risk		-0.1746*** (5.40)	-0.0146 (1.04)
Time Trend		-0.0313*** (6.72)	-0.0069* (1.75)
Firm fixed effects	No	No	Yes
N	15,115	15,115	15,115
R^2	0.0010	0.2352	0.9111

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