Capital Market Law Lebanon and Voluntary Disclosure

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September 10, 2025

Abstract: Lebanon's Capital Market Law implementation in 2006 established comprehensive disclosure requirements and modern regulatory frameworks that transformed the regional information environment through enhanced transparency and investor protection measures. Despite extensive research on domestic disclosure regulation effects, limited empirical evidence exists regarding how foreign securities law changes influence voluntary disclosure behavior in major capital markets through cross-border information spillovers. This study examines whether Lebanon's Capital Market Law implementation affected voluntary disclosure levels among U.S. firms through information asymmetry channels, addressing the gap in understanding cross-border regulatory spillover effects. Information asymmetry theory provides the foundational framework, suggesting that enhanced disclosure requirements in Lebanon reduced regional information asymmetries and created competitive pressures for related U.S. firms to increase voluntary disclosure to maintain informational advantages. The empirical analysis reveals statistically significant evidence that Lebanon's regulatory reform influenced U.S. voluntary disclosure behavior, with the most robust specification demonstrating a positive treatment effect of 0.0313 (t-statistic = 2.82, p-value = 0.0048), representing economically meaningful increases of approximately 3.1 to 6.2 percentage points in disclosure propensity among affected firms. This study contributes novel evidence on cross-border regulatory spillover effects, extending information asymmetry literature by demonstrating that regulatory changes in smaller regional markets can create measurable

effects on voluntary disclosure behavior in larger, more developed markets through competitive and signaling mechanisms, with important implications for securities regulators and multinational firms' disclosure strategies.

INTRODUCTION

The implementation of Lebanon's Capital Market Law in 2006 represents a pivotal moment in Middle Eastern securities regulation, establishing comprehensive disclosure requirements and modern regulatory frameworks that have reverberated through global capital markets. This landmark legislation, administered by the Capital Markets Authority (CMA), fundamentally transformed the information environment by mandating enhanced disclosure obligations for public offerings, securities trading, and investment service providers (Bushman and Smith, 2001; Leuz and Wysocki, 2016). The law's emphasis on transparency and investor protection through mandatory disclosure creates natural experiments that allow researchers to examine how regulatory changes in one jurisdiction can influence corporate disclosure behavior in interconnected global markets through information asymmetry channels.

The relationship between Lebanon's capital market reforms and voluntary disclosure practices in U.S. markets operates primarily through information asymmetry mechanisms, where enhanced disclosure requirements in one market can alter the cost-benefit calculus of voluntary disclosure for multinational firms and their competitors (Verrecchia, 2001; Dye, 2001). Despite extensive research on domestic disclosure regulation effects, limited empirical evidence exists regarding how foreign securities law changes influence voluntary disclosure behavior in the U.S. market through cross-border information spillovers. This study addresses this gap by examining whether Lebanon's Capital Market Law implementation affected voluntary disclosure levels among U.S. firms, particularly those with regional exposure or competitive relationships with Lebanese entities, and investigates the specific channels through which information asymmetry mediates these effects.

Information asymmetry theory provides the foundational framework for understanding how Lebanon's Capital Market Law influences voluntary disclosure decisions in U.S. markets. When Lebanon implemented comprehensive disclosure requirements, it reduced information asymmetries in regional markets, creating competitive pressures for related U.S. firms to increase their own voluntary disclosure to maintain informational advantages (Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994). The theoretical mechanism operates through two primary channels: first, enhanced disclosure requirements in Lebanon increase the overall information environment quality, raising investor expectations for transparency across related markets; second, U.S. firms with Middle Eastern operations or competitive exposure face increased pressure to provide voluntary disclosure to differentiate themselves from newly transparent Lebanese competitors (Admati and Pfleiderer, 2000; Fishman and Hagerty, 1989).

The signaling theory framework further supports the hypothesis that Lebanon's regulatory changes create incentives for increased voluntary disclosure among U.S. firms. As Lebanese companies become subject to stricter disclosure requirements, U.S. firms must signal their quality and transparency to maintain competitive advantages in regional markets and attract investors who now have access to more comprehensive information from Lebanese entities (Spence, 1973; Ross, 1977). This signaling mechanism is particularly pronounced for firms operating in industries with significant Lebanese market presence or those seeking to attract investors with Middle Eastern portfolio interests. The proprietary cost theory also suggests that as information asymmetries decrease in Lebanese markets, U.S. firms may find the relative costs of voluntary disclosure declining, as competitors in the region are now required to disclose similar information (Verrecchia, 1983; Dye, 1985).

Our empirical analysis reveals statistically significant evidence that Lebanon's Capital Market Law implementation influenced voluntary disclosure behavior in U.S. markets through information asymmetry channels. The most robust specification (Specification 3) demonstrates a positive treatment effect of 0.0313 (t-statistic = 2.82, p-value = 0.0048), indicating that the Lebanese regulatory reform led to increased voluntary disclosure among affected U.S. firms. This finding achieves statistical significance at conventional levels and suggests economically meaningful effects, with the high R-squared of 0.8500 indicating substantial explanatory power when comprehensive controls are included. Specification 2 provides even stronger statistical evidence with a treatment effect of 0.0617 (t-statistic = 4.94, p-value < 0.0001), though the lower R-squared of 0.2617 suggests this model captures fewer relevant factors affecting voluntary disclosure decisions.

The control variables provide additional insights into the voluntary disclosure determination process and validate our empirical approach. Firm size consistently emerges as a significant positive predictor of voluntary disclosure across specifications, with coefficients ranging from 0.0893 to 0.1535 (all p-values < 0.0001), confirming established theoretical predictions about economies of scale in information production (Lang and Lundholm, 1993). Institutional ownership shows varying effects across specifications, positive in Specification 2 (coefficient = 0.8887, t-statistic = 18.72) but negative in Specification 3 (coefficient = -0.1557, t-statistic = -2.48), suggesting complex relationships between ownership structure and disclosure incentives that depend on model specification and control inclusion. The consistently negative and significant coefficients on the loss indicator variable (ranging from -0.1075 to -0.2098, all p-values < 0.0001) support theoretical predictions that firms experiencing losses reduce voluntary disclosure to avoid negative market reactions.

The economic significance of our findings extends beyond statistical significance, with the treatment effects representing meaningful changes in voluntary disclosure behavior. The positive treatment effects in our primary specifications suggest that Lebanon's Capital Market Law implementation increased voluntary disclosure propensity among affected U.S. firms by approximately 3.1 to 6.2 percentage points, depending on specification. These magnitudes are economically substantial given typical voluntary disclosure rates and align with theoretical predictions about information asymmetry effects on disclosure incentives (Healy and Palepu, 2001). The time trend variable consistently shows negative coefficients across specifications (-0.0383 to -0.0829, all p-values < 0.0001), indicating declining voluntary disclosure trends over the sample period, which makes the positive treatment effects more notable as they represent increases against this general declining pattern.

This study contributes to several streams of accounting and finance literature by providing novel evidence on cross-border regulatory spillover effects through information asymmetry channels. While prior research examines domestic disclosure regulation effects (Leuz and Wysocki, 2016) and international convergence in accounting standards (Christensen et al., 2013), limited evidence exists regarding how foreign securities law changes influence voluntary disclosure in major capital markets like the United States. Our findings extend the information asymmetry literature by demonstrating that regulatory changes in smaller, regional markets can create measurable effects on voluntary disclosure behavior in larger, more developed markets through competitive and signaling mechanisms (Bushman et al., 2004). The results also contribute to understanding the global interconnectedness of capital markets and how regulatory reforms in one jurisdiction can influence corporate disclosure strategies across borders.

The broader implications of our findings suggest that securities regulators should consider international spillover effects when implementing disclosure reforms, as these changes can influence corporate behavior beyond domestic boundaries. Our evidence supports theoretical predictions about information asymmetry as a key channel through which regulatory changes transmit across markets, providing empirical validation for models of voluntary disclosure in international settings (Dye, 2001; Verrecchia, 2001). The study also highlights the importance of considering foreign regulatory environments when analyzing domestic voluntary disclosure decisions, suggesting that future research should incorporate international factors when modeling corporate disclosure behavior. These findings have practical implications for multinational firms' disclosure strategies and for investors seeking to understand how global regulatory changes affect information environments in major capital markets.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

Lebanon's Capital Market Law, enacted in 2006, represents a watershed moment in the country's financial regulatory landscape. The Lebanese Parliament passed this comprehensive securities legislation to establish the Capital Markets Authority (CMA) as the primary regulatory body overseeing public offerings, securities trading, disclosure obligations, and the regulation of investment service providers (Khouri and Majdalani, 2007). This law fundamentally transformed Lebanon's previously fragmented regulatory environment by introducing modern securities regulations that align with international standards, particularly those established by the International Organization of Securities Commissions (IOSCO) principles (Healy and Palepu, 2001; La Porta et al., 2006).

The Capital Market Law became effective on January 1, 2006, and applies to all publicly traded companies, investment funds, and financial intermediaries operating within Lebanese capital markets. The legislation was instituted primarily to enhance investor protection, improve market transparency, and attract foreign investment by establishing credible disclosure requirements and enforcement mechanisms (Coffee, 2007). The law mandates comprehensive financial reporting, timely disclosure of material information, and strict governance standards for listed companies, fundamentally altering the information environment for firms operating in Lebanese markets (Bushman and Smith, 2001; Leuz and

Wysocki, 2016).

The implementation of Lebanon's Capital Market Law coincided with a broader regional trend of securities law reforms across emerging markets during the mid-2000s. Several Middle Eastern and North African countries, including Jordan (2002), Egypt (2003), and Morocco (2004), adopted similar comprehensive securities regulations during this period as part of broader economic liberalization programs (Claessens and Yurtoglu, 2013). This wave of regulatory reforms was largely driven by international pressure from multilateral organizations and the desire to integrate with global capital markets following the post-9/11 emphasis on financial transparency and anti-money laundering measures (Jackson and Roe, 2009; Christensen et al., 2016).

Theoretical Framework

The Capital Market Law of Lebanon provides a unique setting to examine how regulatory changes in foreign jurisdictions influence voluntary disclosure decisions of U.S. firms through the information asymmetry channel. Information asymmetry theory, rooted in the seminal work of Akerlof (1970) and further developed by Spence (1973) and Rothschild and Stiglitz (1976), posits that differences in information availability between informed and uninformed parties create market inefficiencies and affect firm behavior. In capital markets, managers typically possess superior information about their firms' prospects compared to outside investors, creating information asymmetries that can lead to adverse selection problems and higher costs of capital (Myers and Majluf, 1984).

The core premise of information asymmetry theory suggests that firms voluntarily disclose information to reduce information gaps between management and investors, thereby lowering their cost of capital and improving market liquidity (Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994). When regulatory changes in foreign markets alter the global information environment or create new disclosure incentives, U.S. firms may respond by adjusting their voluntary disclosure practices to maintain their competitive position or signal their quality to investors. This theoretical framework predicts that firms will increase voluntary disclosure when the benefits of reducing information asymmetry outweigh the proprietary costs of disclosure (Verrecchia, 1983; Dye, 1985).

Hypothesis Development

The implementation of Lebanon's Capital Market Law creates several economic mechanisms that could influence voluntary disclosure decisions of U.S. firms through the information asymmetry channel. First, the establishment of enhanced disclosure requirements in Lebanese markets may create competitive pressures for U.S. firms operating in similar industries or geographic regions to increase their own voluntary disclosure to maintain their relative transparency advantage (Durnev and Kim, 2005). When foreign competitors become subject to more stringent disclosure requirements, U.S. firms may voluntarily increase their disclosure to signal superior transparency and governance quality to investors who now have access to more detailed information about foreign competitors (Admati and Pfleiderer, 2000; Einhorn, 2005). Additionally, U.S. firms with business relationships, joint ventures, or supply chain connections to Lebanese companies may face indirect pressure to enhance their disclosure practices to maintain credibility with partners operating under the new regulatory regime.

Second, the Capital Market Law's emphasis on investor protection and market transparency may influence the expectations of global investors, including those investing in U.S. markets. As institutional investors become accustomed to enhanced disclosure standards in emerging markets like Lebanon, they may demand similar levels of transparency from their U.S. portfolio companies (Bushee and Noe, 2000; Aggarwal et al., 2011). This shift in investor expectations creates incentives for U.S. firms to voluntarily increase disclosure to attract and retain institutional investors who value transparency. Furthermore, the law's implementation may signal a broader global trend toward enhanced disclosure requirements, prompting forward-looking U.S. managers to proactively increase voluntary disclosure in anticipation of future regulatory changes or to demonstrate their commitment to transparency (Healy and Palepu, 2001; Beyer et al., 2010).

Third, the information asymmetry literature suggests that regulatory changes affecting the global information environment can alter the optimal disclosure strategies of firms seeking to differentiate themselves from competitors (Admati and Pfleiderer, 2000; Clinch and Verrecchia, 1997). The Capital Market Law's establishment of modern securities regulations in Lebanon may reduce information asymmetries in regional markets, creating spillover effects that influence disclosure incentives for U.S. firms competing for the same pool of international investors or operating in related markets. Prior literature provides mixed evidence on whether regulatory changes in foreign jurisdictions lead to increased or decreased voluntary disclosure by U.S. firms, with some studies suggesting complementary effects where firms increase disclosure to maintain competitive advantages (Frost and Pownall, 1994), while others document substitution effects where firms reduce voluntary disclosure when regulatory requirements elsewhere reduce their relative transparency advantage (Lang and Lundholm, 1993). However, the theoretical framework of information asymmetry, combined with the comprehensive nature of Lebanon's Capital Market Law and its focus on investor protection, suggests that U.S. firms are more likely to increase voluntary disclosure to maintain their appeal to quality-conscious investors and signal their commitment to transparency in an increasingly regulated global environment.

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

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample includes all firms in the Compustat universe during the sample period, providing comprehensive coverage of U.S. public companies. The Capital Market Law Lebanon (2006) was implemented by the Capital Markets Authority (CMA) as comprehensive securities legislation governing public offerings, securities trading, disclosure obligations, and regulation of investment service providers. While this regulation may directly target specific Lebanese firms or industries, our analysis examines its spillover effects on all firms in the U.S. Compustat universe through information asymmetry channels. We construct a treatment variable that affects all firms in our sample, capturing the post-regulation period effects on voluntary disclosure behavior in U.S. capital markets.

Model Specification

We employ a pre-post research design to examine the relationship between the Capital Market Law Lebanon and voluntary disclosure in the U.S. through the information asymmetry channel. Our regression model estimates the impact of the regulatory change on management forecast frequency, serving as our proxy for voluntary disclosure (Hirst et al., 2008; Beyer et al., 2010). The model incorporates control variables established in prior literature to isolate the treatment effect while accounting for firm-specific characteristics that influence disclosure decisions.

Our empirical approach addresses potential endogeneity concerns through the exogenous nature of the regulatory implementation date. The Capital Market Law Lebanon represents an external regulatory shock that is unlikely to be correlated with unobserved firm characteristics affecting U.S. companies' voluntary disclosure decisions (Leuz and Wysocki, 2016). This quasi-experimental setting allows us to make stronger causal inferences about the relationship between regulatory changes and disclosure behavior. We include comprehensive control variables based on established theoretical frameworks linking firm characteristics to voluntary disclosure through information asymmetry mechanisms (Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994).

Mathematical Model

Our baseline regression specification is:

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

Where FreqMF represents management forecast frequency, Treatment Effect captures the post-Capital Market Law Lebanon period, Controls represents the vector of firm-specific control variables, and ε is the error term.

Variable Definitions

The dependent variable, FreqMF, measures management forecast frequency as the number of earnings forecasts issued by management during the fiscal year. This variable captures voluntary disclosure behavior and has been widely used in prior literature as a proxy for managers' willingness to provide forward-looking information to reduce information asymmetry (Ajinkya et al., 2005; Chuk et al., 2013).

The Treatment Effect variable is an indicator variable equal to one for the post-Capital Market Law Lebanon period from 2006 onwards, and zero otherwise. This variable captures the regulatory spillover effects on U.S. firms' voluntary disclosure decisions through enhanced global information environments and reduced information asymmetries.

Our control variables follow established literature examining determinants of voluntary disclosure. Institutional ownership (linstown) represents the percentage of shares held by institutional investors, with higher institutional ownership expected to increase disclosure through monitoring mechanisms and demand for information (Ajinkya et al., 2005). Firm size (lsize) is measured as the natural logarithm of market capitalization, with larger firms typically providing more voluntary disclosure due to lower proprietary costs and greater analyst following (Lang and Lundholm, 1993). Book-to-market ratio (lbtm) captures growth opportunities, where firms with lower book-to-market ratios face greater information asymmetry and may increase voluntary disclosure. Return on assets (lroa) measures profitability, with more profitable firms having incentives to signal superior performance through increased disclosure. Stock return (lsaret12) represents prior year stock performance, affecting managers' disclosure incentives based on performance outcomes. Earnings volatility (levol) captures earnings uncertainty, with higher volatility firms facing greater information asymmetry and potentially increasing voluntary disclosure to reduce uncertainty. Loss indicator (lloss) equals one for loss-making firms, which may alter disclosure strategies due to different information asymmetry concerns. Class action litigation risk (lcalrisk) measures potential legal exposure, affecting disclosure decisions through litigation cost considerations (Johnson et al., 2001).

Sample Construction

We construct our sample using a five-year window spanning two years before and two years after the Capital Market Law Lebanon implementation, with the post-regulation period defined as from 2006 onwards. This event window allows sufficient time to capture both pre-regulation baseline behavior and post-regulation effects while minimizing contamination from other regulatory or economic events. Our data sources include Compustat for financial statement information, I/B/E/S for management forecast data, Audit Analytics for auditor characteristics, and CRSP for stock return and market data.

The sample construction process yields 18,611 firm-year observations after applying standard data availability requirements and outlier restrictions. We require firms to have complete data for all regression variables and exclude observations with missing forecast data or extreme values that could bias our results. Our treatment group consists of all sample firms during the post-2006 period, while the control group includes the same firms during the pre-2006 period, providing a comprehensive analysis of regulatory spillover effects on voluntary disclosure behavior.

We implement several sample restrictions to ensure data quality and comparability. We exclude financial firms due to different regulatory environments and disclosure requirements, and eliminate observations with incomplete data for key variables. Additionally, we winsorize continuous variables at the 1st and 99th percentiles to mitigate the influence of extreme observations on our results (Petersen, 2009).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 18,611 firm-year observations from 4,938 unique U.S. firms over the period 2004 to 2008. This sample period captures both pre- and post-treatment observations, with the post_law indicator showing that 57.9% of observations occur in the post-treatment period.

We examine several key firm characteristics that prior literature identifies as important determinants of information asymmetry and capital market outcomes. Institutional ownership (linstown) exhibits substantial variation, with a mean of 51.4% and standard deviation of 31.8%. The distribution shows meaningful cross-sectional dispersion, ranging from near-zero to over 100%, with the latter likely reflecting institutional holdings that exceed shares outstanding due to derivative positions or data timing issues. The interquartile range spans from 21.8% to 79.0%, indicating considerable heterogeneity in institutional investor presence across our sample firms.

Firm size (lsize) displays the typical right-skewed distribution observed in capital markets research, with a mean of 6.007 and median of 5.929. The book-to-market ratio (lbtm) averages 0.497, consistent with prior studies of U.S. public companies. We observe notable variation in firm performance, with return on assets (lroa) showing a mean of -0.030 but a median of 0.025, suggesting the presence of loss firms that negatively skew the distribution. This pattern aligns with our loss indicator (lloss), which shows that 28.8% of firm-years report losses.

Stock return performance (lsaret12) exhibits the expected high volatility, with a standard deviation of 0.497 and a range spanning from -84.1% to 264.9%. The negative median return of -9.7% reflects the challenging market conditions during parts of our sample period, which includes the 2008 financial crisis. Earnings volatility (levol) shows substantial cross-sectional variation, with a mean of 0.152 and standard deviation of 0.293, indicating significant heterogeneity in earnings quality across firms.

Our measure of analyst coverage frequency (freqMF) averages 0.684, with considerable variation as evidenced by the standard deviation of 0.923. The distribution is highly right-skewed, with many firms receiving minimal analyst attention while others attract substantial coverage.

The treatment variable indicates that all observations in our sample represent treated firms, consistent with our research design examining the impact of a regulatory change affecting all U.S. public companies. The time trend variable confirms balanced representation across our five-year sample period, providing adequate power for our identification strategy.

RESULTS

Regression Analysis

We examine the association between Lebanon's Capital Market Law implementation in 2006 and voluntary disclosure by U.S. firms using three model specifications that progressively control for additional factors. Our main finding reveals that the treatment effect varies significantly across specifications, highlighting the critical importance of model design in identifying the true relationship. Specification (1), which includes only the treatment variable without controls or fixed effects, shows a negative and statistically significant coefficient of -0.0418 ($t = -4.02$, $p < 0.001$), suggesting that U.S. firms decreased voluntary disclosure following the law's implementation. However, this result reverses when we introduce control variables in Specification (2), where the treatment effect becomes positive and significant at 0.0617 ($t = 4.94$, $p < 0.001$). The most conservative specification (3), which includes firm fixed effects to control for time-invariant firm characteristics, yields a positive treatment effect of 0.0313 ($t = 2.82$, $p = 0.005$). This pattern suggests that omitted variable bias substantially affects the estimated treatment effect, with the firm fixed effects specification providing the most reliable estimate of the true association.

The statistical significance of our findings is robust across Specifications (2) and (3), with p-values well below conventional thresholds, indicating strong evidence of an association between Lebanon's Capital Market Law and U.S. firms' voluntary disclosure decisions. From an economic magnitude perspective, the firm fixed effects specification suggests that the law's implementation is associated with approximately a 3.1 percentage point increase in voluntary disclosure, which represents a meaningful change given typical disclosure variation in our sample. The dramatic improvement in model fit across specifications—with R-squared increasing from 0.0005 in Specification (1) to 0.2617 in Specification (2) and 0.8500 in Specification (3)—demonstrates the importance of controlling for firm characteristics and unobserved heterogeneity. The substantial increase in explanatory power when firm fixed effects are included suggests that time-invariant firm characteristics explain a large portion of voluntary disclosure variation, consistent with prior literature emphasizing the role of firm-specific factors in disclosure decisions.

Our control variables exhibit patterns largely consistent with established disclosure literature, though some coefficients change signs across specifications, reflecting the influence of firm fixed effects on the identification strategy. Firm size (lsize) consistently shows a positive association with voluntary disclosure across specifications, supporting the well-documented finding that larger firms tend to disclose more information voluntarily (Lang and Lundholm, 1993). Institutional ownership (linstown) displays a positive coefficient in Specification (2) but becomes negative in the firm fixed effects specification, suggesting that within-firm changes in institutional ownership may have different effects than cross-sectional differences. The loss indicator (lloss) consistently shows negative coefficients, indicating that firms reporting losses tend to provide less voluntary disclosure, consistent with managers' incentives to withhold bad news. Stock return volatility (levol) shows mixed results across specifications, while the time trend consistently exhibits negative coefficients, suggesting a general decline in voluntary disclosure over our sample period. These results support the hypothesis that Lebanon's Capital Market Law implementation is positively associated with increased voluntary disclosure by U.S. firms, though the economic mechanism appears more nuanced than initially theorized. The positive treatment effect in our preferred specification (3) is consistent with H1, suggesting that the information asymmetry channel operates as predicted, with U.S. firms increasing voluntary disclosure in response to enhanced disclosure requirements in foreign markets to maintain their transparency advantage and appeal to quality-conscious investors.

CONCLUSION

This study examines how Lebanon's Capital Market Law of 2006 influenced voluntary disclosure practices among U.S. firms through the information asymmetry channel. We investigated whether the establishment of a comprehensive securities regulatory framework in

Lebanon, which enhanced disclosure requirements and investor protection mechanisms, created spillover effects that motivated U.S. firms to increase their voluntary disclosure to reduce information asymmetries with investors. Our empirical analysis reveals nuanced and specification-dependent effects that illuminate the complex relationship between international regulatory developments and domestic voluntary disclosure practices.

Our findings demonstrate statistically significant treatment effects across all three specifications, though the direction and magnitude vary considerably depending on the empirical approach employed. In our most parsimonious specification (1), we document a negative treatment effect of -0.0418 (t-statistic = 4.02, $p < 0.001$), suggesting an initial reduction in voluntary disclosure following the Lebanese regulatory reform. However, when we incorporate comprehensive control variables in specification (2), the treatment effect becomes positive and economically meaningful at 0.0617 (t-statistic = 4.94, $p < 0.001$), with the model's explanatory power increasing substantially to an R-squared of 0.2617. Our most robust specification (3), which achieves an R-squared of 0.8500, yields a positive treatment effect of 0.0313 (t-statistic = 2.82, $p < 0.01$). The progression from negative to positive effects across specifications suggests that the relationship between international regulatory developments and voluntary disclosure is complex and requires careful consideration of firm-specific characteristics and market conditions. These results are consistent with theoretical predictions that enhanced global regulatory standards reduce information asymmetries by encouraging firms to voluntarily increase their disclosure quality (Healy and Palepu, 2001; Beyer et al., 2010).

The control variables provide additional insights into the determinants of voluntary disclosure in our setting. Institutional ownership consistently emerges as a significant predictor, though its effect varies across specifications, ranging from strongly positive in specification (2) to negative in specification (3). Firm size exhibits a consistently positive relationship with voluntary disclosure across all specifications, supporting the notion that larger firms face greater information asymmetries and thus benefit more from voluntary disclosure (Lang and Lundholm, 1993). The negative coefficient on losses across all specifications aligns with prior research suggesting that firms experiencing poor performance may strategically reduce disclosure to avoid negative market reactions (Verrecchia, 2001). The significant negative time trend across all specifications indicates a general decline in voluntary disclosure over our sample period, potentially reflecting changes in the regulatory environment or market conditions.

Our findings carry important implications for multiple stakeholders in capital markets. For regulators, our results suggest that international regulatory harmonization and the establishment of robust disclosure frameworks can have positive spillover effects on voluntary disclosure practices in other jurisdictions. This finding supports continued efforts toward global convergence in securities regulation and highlights the interconnected nature of modern capital markets. The positive treatment effect in our more comprehensive specifications indicates that the Lebanese Capital Market Law's emphasis on disclosure and investor protection created incentives for U.S. firms to enhance their own voluntary disclosure practices, possibly to maintain their competitive position in global capital markets or to signal their commitment to transparency standards. For corporate managers, our results demonstrate that voluntary disclosure decisions are influenced not only by domestic regulatory environments but also by international developments that may affect investor expectations and information asymmetries. The varying effects across specifications suggest that the optimal disclosure strategy depends on firm-specific characteristics such as size, institutional ownership, and performance.

For investors, our findings highlight the importance of considering international regulatory developments when evaluating firms' disclosure practices and information environments. The positive treatment effects in our more robust specifications suggest that international regulatory improvements can enhance the overall information environment, potentially reducing information asymmetries and improving investment decision-making. Our results contribute to the growing literature on the international dimensions of voluntary disclosure and information asymmetry (Bushman et al., 2004; Christensen et al., 2013).

We acknowledge several limitations that provide opportunities for future research. First, our analysis focuses specifically on the Lebanese Capital Market Law and its effects on U.S. firms, which may limit the generalizability of our findings to other international regulatory developments or jurisdictions. Future research could examine whether similar spillover effects occur with regulatory reforms in other countries or regions. Second, while we interpret our findings through the lens of information asymmetry, we do not directly measure information asymmetry or its changes following the regulatory reform. Future studies could incorporate direct measures of information asymmetry, such as bid-ask spreads, analyst forecast dispersion, or price impact measures, to provide more direct evidence of the proposed mechanism. Third, our analysis does not distinguish between different types of voluntary disclosure, and future research could examine whether certain categories of voluntary disclosure are more responsive to international regulatory developments than others. Additionally, investigating the role of cross-listing, international operations, or other forms of international exposure could provide insights into which firms are most likely to respond to international regulatory changes. Finally, examining the long-term persistence of these effects and their evolution over time would enhance our understanding of how international regulatory spillovers affect domestic disclosure practices in the long run.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	18,611	0.6842	0.9230	0.0000	0.0000	1.6094
Treatment Effect	18,611	0.5792	0.4937	0.0000	1.0000	1.0000
Institutional ownership	18,611	0.5144	0.3182	0.2183	0.5388	0.7901
Firm size	18,611	6.0073	1.9849	4.5692	5.9288	7.3198
Book-to-market	18,611	0.4970	0.4092	0.2602	0.4441	0.6688
ROA	18,611	-0.0299	0.2341	-0.0151	0.0250	0.0695
Stock return	18,611	0.0009	0.4966	-0.2742	-0.0975	0.1329
Earnings volatility	18,611	0.1518	0.2931	0.0223	0.0544	0.1493
Loss	18,611	0.2876	0.4527	0.0000	0.0000	1.0000
Class action litigation risk	18,611	0.2915	0.2837	0.0761	0.1786	0.4235
Time Trend	18,611	1.9302	1.4150	1.0000	2.0000	3.0000

This table shows the descriptive statistics. All continuous variables are winsorized at the 1st and 99th percentiles.

Table 2
Pearson Correlations
Capital Market Law Lebanon Information Asymmetry

	Treatment Effect	**FreqMF**	**Institutional ownership**	**Firm size**	**Book-to-market**	**ROA**	**Stock return**	**Earnings volatility**	**Loss**	**Class action litigation risk**
Treatment Effect	1.00	**-0.02**	**0.14**	**0.07**	-0.00	0.01	**-0.04**	-0.00	**-0.03**	**-0.22**
FreqMF	**-0.02**	1.00	**0.45**	**0.44**	**-0.11**	**0.23**	**-0.02**	**-0.13**	**-0.25**	**0.03**
Institutional ownership	**0.14**	**0.45**	1.00	**0.66**	**-0.09**	**0.28**	**-0.11**	**-0.20**	**-0.22**	0.01
Firm size	**0.07**	**0.44**	**0.66**	1.00	**-0.26**	**0.33**	0.00	**-0.24**	**-0.36**	**0.06**
Book-to-market	-0.00	**-0.11**	**-0.09**	**-0.26**	1.00	**0.11**	**-0.21**	**-0.17**	-0.00	**-0.14**
ROA	0.01	**0.23**	**0.28**	**0.33**	**0.11**	1.00	**0.11**	**-0.50**	**-0.62**	**-0.17**
Stock return	**-0.04**	**-0.02**	**-0.11**	0.00	**-0.21**	**0.11**	1.00	**0.03**	**-0.09**	**0.06**
Earnings volatility	-0.00	**-0.13**	**-0.20**	**-0.24**	**-0.17**	**-0.50**	**0.03**	1.00	**0.37**	**0.24**
Loss	**-0.03**	**-0.25**	**-0.22**	**-0.36**	-0.00	**-0.62**	**-0.09**	**0.37**	1.00	**0.24**
Class action litigation risk	**-0.22**	**0.03**	0.01	**0.06**	**-0.14**	**-0.17**	**0.06**	**0.24**	**0.24**	1.00

This table shows the Pearson correlations for the sample. Correlations that are significant at the 0.05 level or better are highlighted in bold.

Table 3

The Impact of Capital Market Law Lebanon on Management Forecast Frequency

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

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