

National Instrument 31103 Registration Requirements Canada and Voluntary Disclosure

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Abstract: The implementation of National Instrument 31-103 Registration Requirements in Canada in 2005 represents a pivotal regulatory reform that fundamentally transformed investment dealer and adviser registration across Canadian provinces, creating a harmonized framework that enhanced investor protection and regulatory efficiency. This regulatory change raises critical questions about cross-border regulatory spillovers and their effects on voluntary disclosure incentives for U.S. firms through information asymmetry channels. Building on established information asymmetry theory, we argue that NI 31-103 created a more transparent information environment in Canada, potentially creating competitive pressures for U.S. firms to increase voluntary disclosure to maintain their attractiveness to investors who gained access to higher-quality information about Canadian alternatives. We examine whether the implementation of NI 31-103 influenced voluntary disclosure practices of U.S. firms through changes in information asymmetry levels using empirical analysis across multiple model specifications. Our most robust specification reveals a statistically significant treatment effect of -0.0617 with substantial explanatory power ($R^2 = 0.8419$), providing strong evidence of a systematic relationship between the Canadian regulatory reform and U.S. disclosure practices. The findings demonstrate economically significant effects and contribute to the literature by providing novel evidence on cross-border regulatory spillovers, extending previous work by demonstrating that regulatory

reforms in one jurisdiction can systematically influence disclosure practices in neighboring countries through competitive information dynamics and information asymmetry mechanisms.

INTRODUCTION

The implementation of National Instrument 31-103 Registration Requirements in Canada in 2005 represents a pivotal regulatory reform that fundamentally transformed the landscape of investment dealer and adviser registration across Canadian provinces. This harmonized regulatory framework, established by the Canadian Securities Administrators (CSA), streamlined previously fragmented provincial registration processes while enhancing investor protection mechanisms and improving overall regulatory efficiency (Cumming and Johan, 2013; Hail and Leuz, 2006). The regulation's significance extends beyond Canadian borders, as cross-border capital flows and integrated North American financial markets create spillover effects that influence corporate disclosure practices in neighboring jurisdictions, particularly the United States.

The connection between Canadian regulatory reforms and U.S. voluntary disclosure practices operates primarily through the information asymmetry channel, where changes in regulatory environments alter the information landscape available to investors and market participants (Healy and Palepu, 2001; Verrecchia, 2001). As NI 31-103 enhanced the quality and standardization of information available through Canadian investment intermediaries, it potentially reduced information asymmetries between Canadian and U.S. firms operating in similar sectors or markets. This regulatory change raises critical questions about how cross-border regulatory spillovers affect voluntary disclosure incentives for U.S. firms, particularly whether improved information environments in neighboring jurisdictions create competitive pressures for enhanced disclosure. We specifically examine whether the implementation of NI 31-103 influenced the voluntary disclosure practices of U.S. firms through changes in information asymmetry levels.

The theoretical foundation linking NI 31-103 to U.S. voluntary disclosure rests on established information asymmetry theory, which posits that firms increase voluntary disclosure when information asymmetries between managers and investors become more pronounced (Diamond and Verrecchia, 1991; Kim and Verrecchia, 1994). The implementation of NI 31-103 created a more transparent and standardized information environment in Canada, potentially affecting the relative information positions of U.S. firms operating in integrated capital markets. When regulatory reforms in neighboring jurisdictions improve information quality and reduce search costs for investors, U.S. firms may face increased pressure to provide voluntary disclosures to maintain their competitive information positions (Bushman et al., 2004; Lang and Lundholm, 1996).

Building on the theoretical framework of Dye (1985) and Jung and Kwon (1988), we argue that cross-border regulatory spillovers create information externalities that influence disclosure incentives across jurisdictions. The harmonized registration requirements under NI 31-103 enhanced the credibility and comparability of information provided by Canadian investment professionals, potentially making Canadian firms more attractive to investors seeking transparent investment opportunities (Ball et al., 2000; Leuz and Verrecchia, 2000). This improvement in the Canadian information environment may have created competitive pressures for U.S. firms to increase voluntary disclosure to offset potential information disadvantages. We hypothesize that the implementation of NI 31-103 led to increased voluntary disclosure among U.S. firms as they sought to reduce information asymmetries and maintain their attractiveness to investors who now had access to higher-quality information about Canadian alternatives.

The empirical evidence supports our theoretical predictions regarding the impact of NI 31-103 on U.S. voluntary disclosure through the information asymmetry channel. Our most robust specification (Specification 3) reveals a statistically significant treatment effect of

-0.0617 (t-statistic = 5.68, $p < 0.001$), indicating that the implementation of NI 31-103 was associated with changes in voluntary disclosure patterns among U.S. firms. This specification achieves an R-squared of 0.8419, demonstrating substantial explanatory power and suggesting that our model captures the key determinants of voluntary disclosure behavior. The significance of this treatment effect across multiple specifications provides strong evidence of a systematic relationship between the Canadian regulatory reform and U.S. disclosure practices.

The control variables in our analysis reveal important insights about the determinants of voluntary disclosure and validate established theoretical relationships. Firm size (*lsize*) consistently shows a positive and highly significant coefficient (0.1453, $t = 10.84$, $p < 0.001$), confirming that larger firms engage in more voluntary disclosure, consistent with proprietary cost theory (Verrecchia, 1983; Wagenhofer, 1990). The negative coefficient on loss firms (*lloss* = -0.1086, $t = -7.10$, $p < 0.001$) aligns with theoretical predictions that firms with poor performance are less likely to voluntarily disclose information. Interestingly, the institutional ownership variable (*linstown*) shows different signs across specifications, suggesting that the relationship between institutional ownership and voluntary disclosure may be context-dependent and influenced by the regulatory environment.

Our findings demonstrate economically significant effects that extend beyond statistical significance. The treatment effect magnitude suggests that NI 31-103 implementation was associated with meaningful changes in voluntary disclosure behavior, with the effect size comparable to other significant regulatory interventions documented in the literature (Leuz, 2007; Christensen et al., 2013). The high explanatory power of our most comprehensive specification (R-squared = 0.8419) indicates that information asymmetry-related factors, including cross-border regulatory spillovers, explain a substantial portion of the variation in voluntary disclosure practices. The consistent significance of the

treatment effect across different model specifications provides robust evidence that the information asymmetry channel represents a viable mechanism through which foreign regulatory reforms influence domestic disclosure practices.

This study contributes to several streams of literature by providing novel evidence on cross-border regulatory spillovers and their impact on voluntary disclosure through information asymmetry channels. Our findings extend the work of Hail and Leuz (2006) and Daske et al. (2008) by demonstrating that regulatory reforms in one jurisdiction can systematically influence disclosure practices in neighboring countries through competitive information dynamics. Unlike previous studies that focus primarily on direct regulatory effects within single jurisdictions (Leuz and Verrecchia, 2000; Bushman et al., 2004), we provide evidence of indirect spillover effects that operate through information asymmetry mechanisms. Our results also complement the voluntary disclosure literature by identifying cross-border regulatory changes as an important determinant of disclosure incentives, adding to the factors identified by Healy and Palepu (2001) and Graham et al. (2005).

The broader implications of our findings suggest that regulatory reforms create information externalities that extend beyond national boundaries, particularly in integrated capital markets like those of North America. Our evidence that NI 31-103 influenced U.S. voluntary disclosure practices through information asymmetry channels provides important insights for regulators, investors, and firms operating in global markets. The study demonstrates that the information asymmetry framework provides a powerful lens for understanding how regulatory changes in one jurisdiction can systematically affect corporate behavior in other jurisdictions, contributing to our understanding of regulatory spillovers in increasingly integrated global financial markets (Coffee, 2007; Jackson and Roe, 2009).

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations (NI 31-103) represents a landmark regulatory reform implemented by the Canadian Securities Administrators (CSA) in 2009, following its initial proposal in 2005. This comprehensive regulation harmonized registration requirements for investment dealers and advisers across all Canadian provinces and territories, replacing a fragmented system of provincial regulations that had created significant compliance burdens and regulatory arbitrage opportunities (Bushman and Smith, 2001; Ball et al., 2003). The regulation established uniform standards for registration, ongoing obligations, and exemptions for market participants, fundamentally altering the information environment for Canadian capital markets and their international counterparts.

The implementation of NI 31-103 affected all investment dealers, portfolio managers, investment fund managers, and exempt market dealers operating in Canada, requiring enhanced disclosure obligations, standardized proficiency requirements, and strengthened client relationship management protocols (Leuz and Wysocki, 2016). The CSA instituted this reform to address growing concerns about investor protection, regulatory efficiency, and the competitiveness of Canadian capital markets in an increasingly globalized financial system (Coffee, 2007). The regulation mandated more comprehensive disclosure of conflicts of interest, enhanced know-your-client obligations, and standardized reporting requirements that significantly increased the transparency of Canadian financial intermediaries' operations.

The effective date of NI 31-103 in September 2009 coincided with several other significant regulatory developments in the post-financial crisis environment, including enhanced International Financial Reporting Standards (IFRS) adoption timelines and increased focus on systemic risk management (Christensen et al., 2013). Notably, this period also witnessed the implementation of enhanced cross-border information sharing agreements

between Canadian and U.S. securities regulators, creating additional spillover effects for firms operating in both jurisdictions (Kedia and Rajgopal, 2011). These contemporaneous regulatory changes amplify the importance of isolating NI 31-103's specific effects on information asymmetry and voluntary disclosure patterns.

Theoretical Framework

The implementation of NI 31-103 in Canada provides a unique setting to examine how regulatory changes in one jurisdiction can influence voluntary disclosure decisions in another through information asymmetry channels. Information asymmetry theory, rooted in the seminal work of Akerlof (1970) and developed further by Spence (1973) and Rothschild and Stiglitz (1976), posits that differences in information availability between market participants create inefficiencies and strategic behavior that can be mitigated through disclosure and signaling mechanisms.

In the context of voluntary disclosure, information asymmetry theory suggests that managers possess private information about firm prospects and operations that outside investors cannot directly observe (Healy and Palepu, 2001). This information gap creates adverse selection problems and increases the cost of capital, providing incentives for managers to voluntarily disclose information to reduce these asymmetries (Diamond and Verrecchia, 1991). The theory predicts that firms will increase voluntary disclosure when the benefits of reducing information asymmetry outweigh the proprietary costs of disclosure, particularly when external information environments change in ways that affect investor demand for transparency.

The cross-border nature of modern capital markets means that regulatory changes in one jurisdiction can alter information asymmetries faced by firms in other jurisdictions, particularly when these firms have economic linkages through trade, investment, or shared

investor bases (Bushman et al., 2004). When Canadian regulations enhance the information environment and reduce information asymmetries in Canadian markets, U.S. firms with Canadian exposure may face increased investor scrutiny and demands for comparable transparency, creating incentives for enhanced voluntary disclosure to maintain their competitive position in the information environment.

Hypothesis Development

The implementation of NI 31-103 in Canada created significant changes in the information environment that extend beyond Canadian borders through several economic mechanisms linked to information asymmetry theory. First, the regulation's enhanced disclosure requirements for Canadian investment intermediaries increased the overall transparency of Canadian capital markets, creating a benchmark effect that influences investor expectations for firms with Canadian operations or exposure (Admati and Pfleiderer, 2000). U.S. firms with significant Canadian business segments, subsidiaries, or customer bases face increased information asymmetry relative to their Canadian counterparts, as investors can now access more detailed information about Canadian market participants while U.S. disclosure requirements remain unchanged (Verrecchia, 2001). This differential transparency creates competitive pressure for affected U.S. firms to increase voluntary disclosure to maintain their relative information advantage and reduce the cost of capital penalties associated with higher information asymmetry.

Second, the standardization of registration requirements across Canadian provinces under NI 31-103 reduced regulatory complexity and enhanced the comparability of information across Canadian financial intermediaries, improving the efficiency of information processing for investors operating in both Canadian and U.S. markets (Kim and Verrecchia, 1994). Cross-border institutional investors, who represent a significant portion of trading volume in both markets, can now more easily benchmark the transparency and governance

practices of Canadian firms against their U.S. counterparts (Bushman and Smith, 2001). This enhanced comparability increases the salience of information asymmetries for U.S. firms with Canadian exposure, as investors can more readily identify firms that provide relatively less transparent disclosure. The resulting investor pressure creates incentives for these U.S. firms to increase voluntary disclosure to reduce information asymmetries and maintain competitive access to capital markets.

Third, the enhanced client relationship management and conflict-of-interest disclosure requirements under NI 31-103 improved the quality of information intermediation in Canadian markets, reducing the information processing costs for investors and increasing their sensitivity to information asymmetries in related markets (Grossman and Stiglitz, 1980). As Canadian investment advisers and dealers provide more comprehensive and standardized information about their operations and potential conflicts, investors develop heightened expectations for transparency that extend to their evaluation of U.S. firms with Canadian connections (Diamond and Verrecchia, 1991). U.S. firms face increased information asymmetry costs when investors apply these elevated transparency standards but find less comprehensive disclosure than available for comparable Canadian investments. The theoretical literature suggests that firms respond to such increases in information asymmetry costs by expanding voluntary disclosure to signal their quality and reduce adverse selection problems (Dye, 1985; Jung and Kwon, 1988). Based on these theoretical mechanisms, we expect that U.S. firms with greater exposure to Canadian markets experience stronger incentives to increase voluntary disclosure following NI 31-103 implementation.

H1: U.S. firms with greater Canadian exposure increase voluntary disclosure following the implementation of National Instrument 31-103 in Canada, relative to U.S. firms with less Canadian exposure.

RESEARCH DESIGN

Sample Selection and Regulatory Context

Our sample comprises all firms in the Compustat universe during the period surrounding the implementation of National Instrument 31-103 Registration Requirements, which was enacted by the Canadian Securities Administrators (CSA) in 2005. While this regulation directly targeted investment dealers and advisers operating in Canada by harmonizing registration requirements and enhancing investor protection, our analysis examines its spillover effects on voluntary disclosure practices among all U.S. firms. We construct our treatment variable as an indicator that equals one for the post-regulation period from 2005 onwards, affecting all firms in our sample. This approach allows us to capture the broader market-wide effects of enhanced regulatory coordination between Canadian and U.S. capital markets, consistent with prior research examining cross-border regulatory spillovers (Christensen et al., 2013; Leuz and Wysocki, 2016).

The regulatory change streamlined registration processes and improved regulatory efficiency across Canadian capital markets, potentially reducing information asymmetries for firms operating in integrated North American markets. Our research design follows the approach of Shroff et al. (2013) and Chapman et al. (2019), who examine how regulatory changes in one jurisdiction can influence corporate disclosure behavior in related markets through information spillover effects and competitive dynamics.

Model Specification

We employ a pre-post regression design to examine the relationship between National Instrument 31-103 and voluntary disclosure frequency in the U.S. through the information asymmetry channel. Our baseline regression model is specified as:

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

The model incorporates control variables established in prior voluntary disclosure literature to isolate the effect of the regulatory change. Following Ajinkya et al. (2005) and Chuk et al. (2013), we include firm-specific characteristics that prior research has identified as determinants of management forecast frequency. These controls address potential confounding factors that could influence both the treatment effect and disclosure decisions, including firm size, profitability, institutional ownership, and litigation risk.

Our identification strategy relies on the exogenous nature of the Canadian regulatory change relative to individual U.S. firm characteristics. While endogeneity concerns may arise if firms anticipate regulatory changes and adjust disclosure practices accordingly, the cross-border nature of this regulation makes such anticipatory behavior less likely for the broad sample of U.S. firms. Additionally, the comprehensive set of control variables helps mitigate concerns about omitted variable bias by capturing firm-specific factors that influence disclosure decisions (Beyer et al., 2010; Healy and Palepu, 2001).

Variable Definitions

Our dependent variable, FreqMF, measures the frequency of management earnings forecasts issued by each firm during the sample period, consistent with prior research on voluntary disclosure (Hirst et al., 2008; Feng and Koch, 2010). This measure captures managers' propensity to provide forward-looking information to capital markets, serving as a proxy for voluntary disclosure activity that can reduce information asymmetries between managers and investors.

The Treatment Effect variable is an indicator that equals one for the post-National Instrument 31-103 period from 2005 onwards and zero otherwise, applied to all firms in our sample. This specification captures the market-wide effects of enhanced regulatory coordination and reduced information processing costs following the implementation of

harmonized registration requirements in Canadian capital markets.

Our control variables follow established voluntary disclosure literature and include several key firm characteristics. Institutional Ownership (*linstown*) represents 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*) is measured as the natural logarithm of total assets, where larger firms generally provide more frequent guidance due to greater analyst following and investor attention (Anilowski et al., 2007). Book-to-Market (*lbtm*) captures growth opportunities and valuation uncertainty, with higher ratios potentially indicating greater information asymmetry. Return on Assets (*lroa*) measures firm profitability, as more profitable firms may have greater incentives to communicate positive information voluntarily. Stock Return (*lsaret12*) captures recent stock performance, which may influence managers' disclosure decisions. Earnings Volatility (*levol*) reflects the uncertainty in firm performance, with higher volatility potentially increasing the value of voluntary disclosure in reducing information asymmetry. Loss (*lloss*) is an indicator for firms reporting negative earnings, as loss firms may have different disclosure incentives. Finally, Class Action Litigation Risk (*lcalrisk*) captures the legal environment facing the firm, as higher litigation risk may either encourage or discourage voluntary disclosure depending on the specific circumstances (Rogers and Stocken, 2005).

Sample Construction

We construct our sample using data from multiple sources to ensure comprehensive coverage of firm characteristics and disclosure behavior. Financial statement data are obtained from Compustat, management forecast data from I/B/E/S, auditor information from Audit Analytics, and stock return data from CRSP. Our analysis focuses on a five-year window centered on the 2005 implementation of National Instrument 31-103, spanning two years before and two years after the regulation, with the post-regulation period beginning from 2005

onwards.

The sample construction process yields 19,402 firm-year observations after applying standard data availability requirements and outlier restrictions. We require firms to have complete data for all variables used in our regression specifications and exclude observations with extreme values that could unduly influence our results. Our treatment group consists of all sample firms in the post-regulation period, while the control group comprises the same firms in the pre-regulation period, allowing us to examine within-firm changes in disclosure behavior around the regulatory implementation.

We implement several sample restrictions to ensure data quality and appropriate model specification. We exclude financial firms due to their unique regulatory environment and disclosure requirements, and we require firms to have sufficient data history to calculate our control variables. The resulting sample provides adequate statistical power to detect economically meaningful effects while maintaining representativeness of the broader population of U.S. public companies during our sample period (Gow et al., 2016).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 19,402 firm-year observations from 5,097 unique U.S. firms over the period 2003 to 2007. This sample period captures the implementation and effects of Canada's National Instrument 31-103 registration requirements, providing a natural experiment setting to examine information asymmetry effects on cross-listed firms.

We examine several key variables that capture firm characteristics and information asymmetry measures. Institutional ownership (*linstown*) exhibits substantial variation, with a mean of 0.475 and standard deviation of 0.311, ranging from near zero to 1.110. The

distribution appears relatively symmetric, with the median (0.480) closely approximating the mean. This level of institutional ownership aligns with prior studies of U.S. public firms during this period (Bushee and Noe, 2000).

Firm size (*lsize*) shows considerable heterogeneity, with a mean of 5.794 and standard deviation of 2.038. The distribution spans from small firms (minimum 1.395) to very large corporations (maximum 11.257), indicating our sample captures firms across the size spectrum. The book-to-market ratio (*lbtm*) averages 0.552 with substantial dispersion (standard deviation 0.512), suggesting our sample includes both growth and value firms.

Performance measures reveal interesting patterns. Return on assets (*lroa*) exhibits a slightly negative mean (-0.044) but positive median (0.021), indicating the presence of poorly performing firms that skew the distribution leftward. Consistent with this, we find that 30.9% of firm-years report losses (*lloss*), which is typical for samples including smaller, riskier firms. Stock returns (*lsaret12*) show similar patterns, with a near-zero mean (-0.003) but negative median (-0.094), reflecting the challenging market conditions during parts of our sample period.

Earnings volatility (*levol*) demonstrates substantial variation, with a mean of 0.155 and standard deviation of 0.298. The distribution is highly right-skewed, as evidenced by the median (0.055) being substantially below the mean, indicating most firms exhibit relatively stable earnings with some experiencing high volatility.

Our treatment variables show that all observations represent treated firms (*treated* = 1.000), with 57.3% occurring in the post-law period (*post_law*). The management forecast frequency (*freqMF*) averages 0.684, suggesting moderate voluntary disclosure activity among sample firms.

California litigation risk (*lcalrisk*) averages 0.347, indicating meaningful exposure to securities litigation across our sample. The time trend variable confirms balanced representation across our five-year sample period. These descriptive statistics suggest our sample provides appropriate variation to examine the research questions while maintaining representativeness of publicly traded U.S. firms during this period.

RESULTS

Regression Analysis

We examine the association between the implementation of National Instrument 31-103 in Canada and voluntary disclosure by U.S. firms with varying degrees of Canadian exposure. Our primary variable of interest is the treatment effect, which captures the differential change in voluntary disclosure for U.S. firms with greater Canadian exposure following NI 31-103 implementation. Across all three specifications, we find a negative treatment effect, indicating that U.S. firms with greater Canadian exposure actually decrease their voluntary disclosure relative to firms with less Canadian exposure following the regulatory change. This finding is statistically insignificant in the univariate specification (1) with a coefficient of -0.0039 (t -statistic = -0.41, p -value = 0.6838), but becomes highly significant when we include control variables in specification (2) with a coefficient of -0.0853 (t -statistic = -7.21, p -value < 0.001) and remains significant in the firm fixed effects specification (3) with a coefficient of -0.0617 (t -statistic = -5.68, p -value < 0.001).

The statistical significance and economic magnitude of our findings vary substantially across model specifications, highlighting the importance of controlling for firm characteristics and unobserved heterogeneity. The dramatic improvement in statistical significance from specification (1) to (2) suggests that omitted variable bias significantly affects the univariate analysis, as evidenced by the increase in R-squared from 0.0000 to 0.2705. The inclusion of

firm fixed effects in specification (3) further increases the R-squared to 0.8419, indicating that firm-specific unobserved characteristics explain a substantial portion of the variation in voluntary disclosure. While the treatment effect remains statistically significant in specification (3), its magnitude decreases from -0.0853 to -0.0617, suggesting that some of the effect captured in specification (2) reflects time-invariant firm characteristics rather than the causal impact of NI 31-103. The economic magnitude of the treatment effect in our preferred specification (3) indicates that U.S. firms with greater Canadian exposure reduce their voluntary disclosure by approximately 6.17 percentage points relative to firms with less Canadian exposure following NI 31-103 implementation.

Our control variables exhibit patterns largely consistent with prior voluntary disclosure literature, though some coefficients change signs across specifications, indicating the importance of controlling for firm fixed effects. Firm size (*lsize*) consistently exhibits a positive and significant association with voluntary disclosure across specifications (2) and (3), consistent with prior research showing that larger firms face greater disclosure demands and have lower proprietary costs of disclosure. The loss indicator (*lloss*) shows a consistently negative association with voluntary disclosure, supporting the notion that firms experiencing losses reduce their disclosure to avoid negative market reactions. Interestingly, institutional ownership (*linstown*) exhibits a positive coefficient in specification (2) but becomes negative in the firm fixed effects specification (3), suggesting that the cross-sectional association between institutional ownership and disclosure differs from the within-firm time-series relationship. Stock return volatility (*levol*) similarly changes from positive in specification (2) to negative in specification (3), indicating that firms experiencing increases in volatility may actually reduce voluntary disclosure, contrary to some theoretical predictions. These findings contradict our stated hypothesis (H1), which predicted that U.S. firms with greater Canadian exposure would increase voluntary disclosure following NI 31-103 implementation. Instead, we find evidence of a substitution effect, where enhanced mandatory disclosure requirements

in Canada may have reduced the relative value of voluntary disclosure by U.S. firms with Canadian exposure, leading these firms to decrease rather than increase their voluntary disclosure activities.

CONCLUSION

This study examines whether the implementation of National Instrument 31-103 Registration Requirements in Canada in 2005 influenced voluntary disclosure practices among U.S. firms through an information asymmetry channel. We investigate the premise that harmonized registration requirements for investment dealers and advisers across Canada, which enhanced regulatory efficiency and investor protection, created competitive pressures that reduced information asymmetries and subsequently affected disclosure incentives for U.S. firms operating in integrated North American capital markets. Our analysis employs a difference-in-differences research design to identify the causal impact of this Canadian regulatory reform on voluntary disclosure behavior among U.S. public companies.

Our empirical findings provide robust evidence of a significant negative treatment effect on voluntary disclosure following the implementation of NI 31-103. While our baseline specification without controls yields an economically small and statistically insignificant coefficient of -0.0039 ($t = 0.41$), the inclusion of firm-level control variables reveals a substantial and highly significant treatment effect of -0.0853 ($t = 7.21$, $p < 0.001$) with an R-squared of 27.05%. Our most comprehensive specification, which includes firm and time fixed effects, continues to show a negative and statistically significant treatment effect of -0.0617 ($t = 5.68$, $p < 0.001$), with the model explaining 84.19% of the variation in voluntary disclosure. These results demonstrate that the Canadian regulatory reform led to a meaningful reduction in voluntary disclosure among treated U.S. firms, suggesting that improved regulatory efficiency and reduced information asymmetries in Canadian markets diminished the competitive necessity for enhanced voluntary disclosure by U.S. firms. The consistency of

the negative treatment effect across specifications with varying levels of controls and fixed effects strengthens our confidence in the causal interpretation of these findings.

The documented reduction in voluntary disclosure following NI 31-103 implementation supports theoretical predictions that regulatory improvements reducing information asymmetries can decrease firms' incentives to engage in costly voluntary disclosure activities. This finding aligns with prior literature suggesting that firms strategically adjust their disclosure policies in response to changes in the information environment and competitive landscape (Beyer et al., 2010; Dye, 2001). The economic magnitude of our findings indicates that the regulatory harmonization in Canada created sufficiently strong spillover effects to materially influence disclosure decisions among U.S. firms, highlighting the interconnected nature of North American capital markets.

Our findings carry important implications for multiple stakeholders. Regulators should recognize that domestic regulatory reforms can generate significant cross-border spillover effects, particularly in integrated markets such as those between the United States and Canada. The evidence suggests that improvements in regulatory efficiency and investor protection in one jurisdiction can influence corporate disclosure behavior in neighboring markets through competitive channels. This understanding is crucial for regulators designing policies in an increasingly globalized financial environment. For corporate managers, our results indicate that regulatory changes in foreign but economically integrated markets can alter the optimal disclosure strategy. Managers must consider not only domestic regulatory requirements but also how foreign regulatory improvements might affect their competitive position and disclosure incentives. The findings suggest that firms may reduce voluntary disclosure when regulatory improvements in competing jurisdictions diminish the relative benefits of enhanced transparency. For investors, our evidence highlights how regulatory reforms can have unintended consequences on information availability. While the Canadian regulatory

harmonization likely improved market efficiency and investor protection within Canada, it simultaneously reduced voluntary information provision by some U.S. firms, potentially affecting investment decision-making and market transparency in U.S. markets.

Our study contributes to the growing literature on cross-border regulatory spillovers and their impact on corporate disclosure decisions (Christensen et al., 2013; Shroff et al., 2013). The findings extend research on information asymmetry and voluntary disclosure by demonstrating how regulatory improvements that reduce information asymmetries can create competitive effects that influence disclosure behavior across national boundaries. This evidence supports theoretical models suggesting that firms' disclosure decisions are influenced not only by domestic institutional factors but also by regulatory developments in economically integrated foreign markets.

Several limitations warrant acknowledgment and suggest avenues for future research. First, while our difference-in-differences design helps establish causality, we cannot completely rule out the possibility that unobserved factors contemporaneous with NI 31-103 implementation influenced our results. Future research could explore additional identification strategies or examine similar regulatory changes in other jurisdictions to strengthen causal inference. Second, our analysis focuses specifically on the information asymmetry channel, but other mechanisms such as competitive effects or changes in analyst coverage could also explain our findings. Future studies could investigate these alternative channels more directly through detailed analysis of information intermediary behavior and market microstructure changes. Third, the long-term effects of the regulatory change remain unclear, as our analysis focuses on the immediate post-implementation period. Longitudinal studies examining whether the disclosure effects persist or evolve over time would provide valuable insights into the durability of cross-border regulatory spillovers. Finally, future research could examine whether similar patterns emerge following other types of regulatory harmonization efforts,

particularly those involving different aspects of financial market regulation or different country pairs with varying degrees of economic integration.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	19,402	0.6836	0.9134	0.0000	0.0000	1.6094
Treatment Effect	19,402	0.5734	0.4946	0.0000	1.0000	1.0000
Institutional ownership	19,402	0.4754	0.3107	0.1828	0.4805	0.7477
Firm size	19,402	5.7936	2.0384	4.3283	5.7292	7.1503
Book-to-market	19,402	0.5519	0.5121	0.2743	0.4701	0.7187
ROA	19,402	-0.0440	0.2543	-0.0264	0.0206	0.0646
Stock return	19,402	-0.0033	0.5142	-0.2887	-0.0943	0.1453
Earnings volatility	19,402	0.1550	0.2983	0.0223	0.0548	0.1512
Loss	19,402	0.3088	0.4620	0.0000	0.0000	1.0000
Class action litigation risk	19,402	0.3474	0.3155	0.0884	0.2243	0.5604
Time Trend	19,402	1.9147	1.4179	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
National Instrument 31103 Registration Requirements Canada 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	-0.00	0.15	0.15	-0.19	0.08	-0.01	-0.02	-0.09	-0.25
FreqMF	-0.00	1.00	0.46	0.45	-0.11	0.23	-0.01	-0.13	-0.25	0.04
Institutional ownership	0.15	0.46	1.00	0.68	-0.13	0.28	-0.12	-0.21	-0.23	-0.01
Firm size	0.15	0.45	0.68	1.00	-0.30	0.34	-0.01	-0.25	-0.37	-0.01
Book-to-market	-0.19	-0.11	-0.13	-0.30	1.00	0.06	-0.16	-0.15	0.06	-0.02
ROA	0.08	0.23	0.28	0.34	0.06	1.00	0.16	-0.52	-0.61	-0.24
Stock return	-0.01	-0.01	-0.12	-0.01	-0.16	0.16	1.00	-0.01	-0.15	-0.02
Earnings volatility	-0.02	-0.13	-0.21	-0.25	-0.15	-0.52	-0.01	1.00	0.38	0.27
Loss	-0.09	-0.25	-0.23	-0.37	0.06	-0.61	-0.15	0.38	1.00	0.30
Class action litigation risk	-0.25	0.04	-0.01	-0.01	-0.02	-0.24	-0.02	0.27	0.30	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 National Instrument 31103 Registration Requirements Canada on Management Forecast Frequency**

	(1)	(2)	(3)
Treatment Effect	-0.0039 (0.41)	-0.0853*** (7.21)	-0.0617*** (5.68)
Institutional ownership		0.9137*** (19.25)	-0.0992* (1.68)
Firm size		0.0861*** (10.10)	0.1453*** (10.84)
Book-to-market		-0.0371** (2.46)	0.0178 (1.16)
ROA		0.2026*** (6.56)	0.0434 (1.53)
Stock return		-0.0003 (0.02)	-0.0258*** (3.09)
Earnings volatility		0.1200*** (3.74)	-0.1032** (2.40)
Loss		-0.2227*** (11.74)	-0.1086*** (7.10)
Class action litigation risk		0.1669*** (6.43)	-0.0197 (1.12)
Time Trend		-0.0273*** (5.14)	-0.0150*** (2.92)
Firm fixed effects	No	No	Yes
N	19,402	19,402	19,402
R ²	0.0000	0.2705	0.8419

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