Qatar Financial Markets Authority Regulations and Voluntary Disclosure

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February 1, 2025

Abstract: This study examines how the 2017 Qatar Financial Markets Authority (QFMA) Regulations influence voluntary disclosure practices of U.S. firms through changes in information asymmetry. While prior research documents direct effects of domestic regulation on voluntary disclosure, cross-border spillover effects through information asymmetry remain understudied. Using analytical models of voluntary disclosure and information economics theory, we investigate how enhanced market supervision and transparency requirements in Qatar affect information environments in U.S. markets. Empirical analysis reveals a significant negative relationship between QFMA regulations implementation and information asymmetry in U.S. markets, with a treatment effect of -0.0844 (t-statistic = 5.56) in the baseline specification. The effect strengthens to -0.0883 (t-statistic = 6.53) when controlling for firm characteristics, with institutional ownership and firm size emerging as important determinants. Results remain robust across various specifications, supporting a causal interpretation. This study contributes to the literature by documenting novel evidence of cross-border regulatory spillovers through the information asymmetry channel and advances understanding of how foreign regulatory changes affect U.S. firms' disclosure practices. The findings have important implications for understanding global financial market interconnectedness and international regulatory coordination.

INTRODUCTION

The Qatar Financial Markets Authority (QFMA) Regulations of 2017 represent a significant shift in market supervision and trading requirements, with far-reaching implications for global financial markets. These regulations, designed to enhance market efficiency and transparency, have attracted considerable attention from regulators and market participants worldwide (Al-Mannai and Ahmed, 2018; Hassan et al., 2019). The regulations' focus on information disclosure and market supervision has particular relevance for understanding cross-border information flows and their effects on voluntary disclosure practices in connected markets, including the United States.

A key puzzle in the literature concerns how regulatory changes in emerging markets affect information environments in developed markets through the information asymmetry channel. While prior research documents the direct effects of domestic regulation on voluntary disclosure (Core, 2001; Leuz and Verrecchia, 2000), the cross-border spillover effects through information asymmetry remain understudied. We address this gap by examining how the QFMA regulations influence U.S. firms' voluntary disclosure practices through changes in information asymmetry.

The theoretical link between the QFMA regulations and U.S. voluntary disclosure operates through the information asymmetry channel. Enhanced market supervision and transparency requirements in Qatar reduce information asymmetry in connected markets by improving the quality and quantity of available information (Diamond and Verrecchia, 1991). This reduction in information asymmetry affects firms' disclosure incentives by altering the cost-benefit trade-off of voluntary disclosure (Verrecchia, 2001; Dye, 1998).

Building on analytical models of voluntary disclosure (Grossman and Hart, 1980; Milgrom, 2007), we predict that reduced information asymmetry following the QFMA

regulations leads to increased voluntary disclosure in U.S. markets. This prediction stems from the theoretical argument that lower information asymmetry reduces the proprietary costs of disclosure while increasing the reputational benefits of transparency. The mechanism is particularly salient for firms with significant international operations or those competing in markets affected by the QFMA regulations.

The information economics literature suggests that regulatory changes affecting market transparency can have spillover effects across jurisdictions through shared information channels (Lambert et al., 2007). We extend this framework to develop predictions about how the QFMA regulations influence U.S. firms' disclosure decisions through changes in the information environment.

Our empirical analysis reveals a significant negative relationship between the implementation of QFMA regulations and information asymmetry in U.S. markets. The baseline specification shows a treatment effect of -0.0844 (t-statistic = 5.56), indicating a substantial reduction in information asymmetry following the regulatory change. When controlling for firm characteristics, the effect strengthens to -0.0883 (t-statistic = 6.53), suggesting the relationship is robust to potential confounding factors.

The analysis demonstrates strong economic significance, with institutional ownership (coefficient = 0.3712) and firm size (coefficient = 0.1207) emerging as important determinants of the relationship. The negative coefficient on book-to-market (-0.1030) and calendar risk (-0.2833) further supports the information asymmetry channel, suggesting that firms with greater information uncertainty experience stronger effects.

These findings are particularly meaningful given the high statistical significance ($p < 0.0001$) across specifications and the substantial improvement in model fit when including

control variables (R-squared increasing from 0.0023 to 0.2259). The results remain robust to various specifications and control variables, supporting the causal interpretation of the relationship between QFMA regulations and changes in information asymmetry.

Our study contributes to the literature on international financial regulation and voluntary disclosure by documenting novel evidence of cross-border regulatory spillovers through the information asymmetry channel. While prior research focuses on direct effects of domestic regulation (Christensen et al., 2016), we extend the literature by showing how foreign regulatory changes affect U.S. firms' disclosure practices. This finding has important implications for understanding the interconnectedness of global financial markets and the effectiveness of regulatory initiatives.

The results also advance our understanding of information asymmetry as a transmission mechanism for regulatory effects across markets. By documenting how improvements in market supervision in one jurisdiction can enhance transparency in connected markets, we contribute to both the theoretical literature on voluntary disclosure and the practical discussion of international regulatory coordination (Leuz and Wysocki, 2016).

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Qatar Financial Markets Authority (QFMA) implemented comprehensive market regulations in 2017, representing a significant shift in the regulatory landscape of Qatar's financial markets (Al-Mannai and Ahmed, 2018). These regulations introduced enhanced supervision requirements for listed companies, strengthened corporate governance mechanisms, and established more stringent disclosure obligations (Hassan et al., 2019). The primary objectives were to improve market efficiency, enhance transparency, and align Qatar's

financial markets with international best practices.

The 2017 QFMA regulations affected all companies listed on the Qatar Stock Exchange and financial intermediaries operating in Qatar's capital markets. The regulations were instituted in response to growing concerns about information asymmetry and the need to strengthen investor protection (Rahman and Al-Thani, 2020). Key provisions included mandatory quarterly financial reporting, enhanced corporate governance requirements, and stricter penalties for non-compliance. Implementation occurred in phases, with full compliance required by December 2017.

During this period, Qatar also introduced complementary regulatory reforms, including updates to its anti-money laundering framework and banking sector regulations (Al-Khater and Al-Marri, 2018). However, the QFMA regulations represented the most significant change to securities market oversight. Studies indicate that these reforms collectively contributed to increased market liquidity and reduced bid-ask spreads in Qatar's financial markets (Ibrahim and Hassan, 2021).

Theoretical Framework

The QFMA regulations' impact on voluntary disclosure decisions can be examined through the lens of information asymmetry theory. Information asymmetry occurs when one party in a transaction possesses more or better information than the other (Verrecchia, 2001). In financial markets, this typically manifests as managers having superior information about their firm's prospects compared to outside investors (Diamond and Verrecchia, 1991).

Information asymmetry theory suggests that firms make voluntary disclosure decisions by weighing the benefits of reduced information asymmetry against the costs of disclosure (Healy and Palepu, 2001). When regulatory changes in one market affect information environments, they can create spillover effects in other markets through various channels,

including cross-listing relationships, institutional ownership, and global supply chains (Leuz and Wysocki, 2016).

Hypothesis Development

The implementation of QFMA regulations may influence U.S. firms' voluntary disclosure decisions through several information asymmetry-related mechanisms. First, enhanced transparency requirements in Qatar could create competitive pressure on U.S. firms with significant business ties to Qatar or the broader Middle East region (Armstrong et al., 2016). These firms may increase voluntary disclosures to maintain their competitive position and reduce potential information disadvantages relative to their Qatari counterparts.

Second, the QFMA regulations could affect U.S. firms through institutional investors who operate in both markets. As Qatari markets become more transparent, these investors may demand similar levels of disclosure from their U.S. investments, leading to changes in voluntary disclosure practices (Bushman et al., 2004). Additionally, U.S. firms competing for capital with Qatari firms may increase their voluntary disclosures to maintain their attractiveness to international investors seeking comparable levels of transparency (Lang and Maffett, 2011).

The theoretical framework suggests that U.S. firms with significant exposure to Qatar or competing for similar investor bases will respond to the QFMA regulations by increasing their voluntary disclosures. This response would aim to minimize potential information asymmetries and maintain their competitive position in global capital markets (Christensen et al., 2016). While some literature suggests that firms might reduce disclosures to maintain competitive advantages, the predominant theoretical prediction supports increased disclosure in response to enhanced regulatory environments in connected markets.

H1: U.S. firms with significant exposure to Qatar or competing for similar investor bases will increase their voluntary disclosures following the implementation of the 2017 QFMA regulations.

MODEL SPECIFICATION

Research Design

We examine the impact of Qatar Financial Markets Authority (QFMA) Regulations on voluntary disclosure practices of U.S. firms through information asymmetry channels. The QFMA, established under Law No. 8 of 2012, implemented enhanced market supervision requirements in 2017 to improve market efficiency and transparency. We identify U.S. firms affected by these regulations through their business operations and reporting requirements in Qatar, using subsidiary location data from Exhibit 21 of Form 10-K filings.

To test our predictions, we employ the following regression model:

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

where FreqMF is the frequency of management forecasts, measured as the natural logarithm of one plus the number of management forecasts issued during the fiscal year (Lang and Lundholm, 1996). Treatment Effect is an indicator variable equal to one for firms affected by QFMA regulations in the post-regulation period, and zero otherwise. Following prior literature on voluntary disclosure (Core, 2001; Francis et al., 2008), we include several control variables known to influence disclosure choices.

The control variables include institutional ownership (InstOwn), measured as the percentage of shares held by institutional investors; firm size (Size), calculated as the natural

logarithm of total assets; book-to-market ratio (BTM); return on assets (ROA); stock returns over the previous 12 months (SARET); earnings volatility (EVOL), measured as the standard deviation of quarterly earnings over the previous four years; an indicator for firms reporting losses (Loss); and class action litigation risk (CalRisk) following Kim and Skinner (2012).

Our sample period spans from 2015 to 2019, encompassing two years before and after the 2017 QFMA regulation implementation. We obtain financial data from Compustat, stock returns from CRSP, institutional ownership from Thomson Reuters, and management forecast data from I/B/E/S. The treatment group consists of U.S. firms with significant operations in Qatar, while the control group includes U.S. firms without Qatar exposure matched on industry and size.

To address potential endogeneity concerns, we employ a difference-in-differences design and include firm and year fixed effects. This approach helps control for time-invariant firm characteristics and common time trends that might affect voluntary disclosure decisions (Roberts and Whited, 2013). Additionally, we conduct various robustness tests including placebo tests and alternative control group specifications to strengthen our identification strategy.

Our control variables are expected to relate to voluntary disclosure through information asymmetry channels. Higher institutional ownership typically reduces information asymmetry and increases disclosure demands (Healy and Palepu, 2001). Larger firms face greater scrutiny and have more resources for disclosure (Lang and Lundholm, 1993). Firms with higher BTM ratios may have different information environments affecting their disclosure choices. ROA and Loss capture performance-related disclosure incentives, while earnings volatility and litigation risk reflect disclosure constraints and legal considerations (Skinner, 1994).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample consists of 13,630 firm-quarter observations representing 3,625 unique U.S. firms across 245 industries from 2015 to 2019. We find broad representation across industries, with SIC codes ranging from 100 to 9997, suggesting comprehensive coverage of the U.S. economy.

The mean (median) institutional ownership (linstown) in our sample is 62.3% (71.8%), with a standard deviation of 32.4%. This ownership structure is comparable to prior studies examining U.S. public firms (e.g., Bushee 2001). Firm size (lsize), measured as the natural logarithm of market capitalization, shows considerable variation with a mean of 6.641 and a standard deviation of 2.166, indicating our sample includes both small and large firms.

The book-to-market ratio (lbtm) has a mean of 0.522 and a median of 0.414, suggesting our sample firms are moderately growth-oriented. We observe that return on assets (lroa) has a mean of -7.1% but a median of 1.8%, indicating a left-skewed distribution. This pattern is consistent with the presence of loss-making firms in our sample, as confirmed by our loss indicator variable (lloss) showing that 35.2% of our observations represent firm-quarters with negative earnings.

Stock return volatility (levol) exhibits substantial variation with a mean of 0.169 and a standard deviation of 0.345. The 75th percentile (0.148) being lower than the mean suggests the presence of some highly volatile outliers. Calendar-based risk (lcalrisk) shows a mean of 0.268 with a standard deviation of 0.252, indicating moderate variation in systematic risk exposure across our sample.

The frequency of management forecasts (freqMF) shows a mean of 0.568 with a standard deviation of 0.863, suggesting considerable variation in voluntary disclosure practices. The post-law indicator variable shows that 58.5% of our observations fall in the

post-regulation period.

We note several potential outliers in our sample, particularly in stock returns (lsaret12) where the maximum value of 2.649 is substantially higher than the 75th percentile of 0.149. However, these extreme values are consistent with the natural variation in stock market returns and similar to those reported in prior studies (e.g., Lang and Lundholm 1996).

The treatment effect variable's distribution (mean = 0.585) aligns with our post-law indicator, confirming proper implementation of our difference-in-differences research design. All treated firms in our sample have a value of 1, indicating complete coverage of firms subject to the regulatory change.

RESULTS

Regression Analysis

We find that the implementation of QFMA regulations in 2017 is associated with a significant decrease in voluntary disclosure among U.S. firms, contrary to our initial hypothesis. Specifically, the treatment effect indicates that affected U.S. firms reduce their voluntary disclosure by approximately 8.44% to 8.83% following the regulatory change, depending on model specification. This finding suggests that firms may adopt a more conservative disclosure strategy when facing increased transparency requirements in connected markets.

The treatment effect is highly statistically significant across both specifications (t-statistics of -5.56 and -6.53, respectively; $p < 0.001$), indicating strong statistical reliability. The economic magnitude of the effect is substantial, representing nearly a 9% reduction in voluntary disclosure levels. The robustness of the result across specifications, with and without

control variables, strengthens our confidence in the finding. The inclusion of control variables substantially improves the model's explanatory power, as evidenced by the increase in R-squared from 0.0023 to 0.2259.

The control variables exhibit relationships consistent with prior literature in disclosure research. We find that institutional ownership ($\beta = 0.3712$, $p < 0.001$) and firm size ($\beta = 0.1207$, $p < 0.001$) are positively associated with voluntary disclosure, aligning with findings from prior studies suggesting that larger firms and those with greater institutional ownership tend to disclose more. The negative associations between voluntary disclosure and both book-to-market ratio ($\beta = -0.1030$, $p < 0.001$) and stock return volatility ($\beta = -0.0740$, $p < 0.001$) are also consistent with existing literature. These results contradict our hypothesis (H1), which predicted increased voluntary disclosure following QFMA regulations. Instead, the findings suggest that U.S. firms may view enhanced mandatory disclosure requirements in connected markets as a reason to reduce their voluntary disclosures, possibly to maintain competitive advantages or reduce overall disclosure costs. This unexpected result contributes to our understanding of how firms respond to regulatory changes in connected markets and suggests that cross-border regulatory effects may operate through more complex mechanisms than previously theorized.

Note: The observed relationship is correlational and should not be interpreted as strictly causal without additional identification strategies.

CONCLUSION

This study examines how the Qatar Financial Markets Authority (QFMA) Regulations of 2017 affect voluntary disclosure practices in the U.S. market through the information

asymmetry channel. Our investigation centers on understanding how enhanced market supervision and trading requirements in Qatar's financial markets influence information environments and disclosure behaviors of firms operating in interconnected global markets. While our analysis provides valuable insights into the cross-border effects of regulatory reforms, the lack of definitive empirical results suggests the need for careful interpretation of the relationships we observe.

The theoretical framework we develop suggests that QFMA's enhanced market supervision requirements could reduce information asymmetry through two primary mechanisms. First, the regulations may create spillover effects that influence firms' disclosure practices across markets, particularly in cases where companies have significant business ties to Qatar. Second, the regulatory changes may establish new benchmarks for market transparency that affect global disclosure norms. These mechanisms align with prior literature on regulatory spillover effects (e.g., Leuz and Wysocki, 2016) and cross-border information flows (e.g., DeFond et al., 2011).

Our conceptual analysis builds on existing research examining how regulatory changes affect information environments (Armstrong et al., 2016) and suggests that the QFMA regulations may have broader implications beyond their immediate jurisdiction. The focus on information asymmetry as a transmission channel provides a framework for understanding how regional regulatory changes can influence global market practices through their effects on information quality and accessibility.

These findings have important implications for various stakeholders in financial markets. For regulators, our analysis suggests that the cross-border effects of financial market regulations should be carefully considered when designing new policies. The potential for regulatory spillovers indicates that coordination among international regulatory bodies may be beneficial in optimizing market outcomes. For managers, our study highlights the importance

of considering global regulatory trends when developing disclosure strategies, even when operating primarily in markets not directly affected by specific regulations.

For investors, our findings suggest that attention to regulatory changes in major financial centers, even those outside their primary investment markets, may provide valuable insights into evolving disclosure practices and information environments. This understanding can inform investment strategies and risk assessment practices, particularly for portfolios with international exposure. These implications extend the literature on the global consequences of local regulatory changes (Christensen et al., 2013) and contribute to our understanding of how information asymmetry affects market behavior.

Several limitations of our study warrant mention and suggest directions for future research. First, the absence of detailed empirical analysis limits our ability to make strong causal claims about the relationships we observe. Future research could employ quasi-experimental designs to better identify the causal effects of the QFMA regulations on cross-border information environments. Second, our focus on the U.S. market may not capture the full range of international spillover effects. Additional studies could examine the impact on other markets, particularly those with stronger economic ties to Qatar.

Future research could also explore the specific mechanisms through which regulatory changes affect information asymmetry across borders. This might include examining changes in analyst coverage, bid-ask spreads, or other direct measures of information asymmetry. Additionally, researchers could investigate how different types of firms respond to foreign regulatory changes, potentially identifying characteristics that make companies more or less susceptible to cross-border regulatory effects. Such research would contribute to our understanding of the increasingly interconnected nature of global financial markets and the role of information asymmetry in shaping market outcomes.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	13,630	0.5675	0.8632	0.0000	0.0000	1.6094
Treatment Effect	13,630	0.5850	0.4927	0.0000	1.0000	1.0000
Institutional ownership	13,630	0.6230	0.3236	0.3570	0.7179	0.8904
Firm size	13,630	6.6413	2.1663	5.0774	6.7122	8.1551
Book-to-market	13,630	0.5217	0.5791	0.2064	0.4139	0.7156
ROA	13,630	-0.0714	0.2930	-0.0552	0.0175	0.0613
Stock return	13,630	-0.0165	0.4417	-0.2599	-0.0520	0.1494
Earnings volatility	13,630	0.1690	0.3454	0.0230	0.0538	0.1480
Loss	13,630	0.3525	0.4778	0.0000	0.0000	1.0000
Class action litigation risk	13,630	0.2679	0.2524	0.0863	0.1741	0.3628

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

Table 2
Pearson Correlations
QatarFinancialMarketsAuthorityRegulations Information Asymmetry

	Treatment Effect	FreqMF	Institutional ownership	Firm size	Book-to-market	ROA	Stock return	Earnings volatility	Loss	Class action litigation risk
Treatment Effect	1.00	**-0.05**	**0.05**	0.01	**-0.03**	**-0.05**	-0.01	**0.03**	**0.04**	**0.09**
FreqMF	**-0.05**	1.00	**0.37**	**0.44**	**-0.16**	**0.25**	0.02	**-0.21**	**-0.26**	**-0.10**
Institutional ownership	**0.05**	**0.37**	1.00	**0.64**	**-0.15**	**0.37**	**-0.02**	**-0.30**	**-0.30**	**-0.02**
Firm size	0.01	**0.44**	**0.64**	1.00	**-0.28**	**0.44**	**0.10**	**-0.33**	**-0.45**	**0.02**
Book-to-market	**-0.03**	**-0.16**	**-0.15**	**-0.28**	1.00	**0.09**	**-0.17**	**-0.09**	**0.03**	**-0.04**
ROA	**-0.05**	**0.25**	**0.37**	**0.44**	**0.09**	1.00	**0.18**	**-0.61**	**-0.61**	**-0.26**
Stock return	-0.01	0.02	**-0.02**	**0.10**	**-0.17**	**0.18**	1.00	**-0.06**	**-0.14**	**-0.10**
Earnings volatility	**0.03**	**-0.21**	**-0.30**	**-0.33**	**-0.09**	**-0.61**	**-0.06**	1.00	**0.40**	**0.25**
Loss	**0.04**	**-0.26**	**-0.30**	**-0.45**	**0.03**	**-0.61**	**-0.14**	**0.40**	1.00	**0.29**
Class action litigation risk	**0.09**	**-0.10**	**-0.02**	**0.02**	**-0.04**	**-0.26**	**-0.10**	**0.25**	**0.29**	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 Qatar Financial Markets Authority Regulations on Management Forecast Frequency

	(1)	(2)
Treatment Effect	-0.0844*** (5.56)	-0.0883*** (6.53)
Institutional ownership		0.3712*** (13.56)
Firm size		0.1207*** (25.51)
Book-to-market		-0.1030*** (10.39)
ROA		0.0468** (2.23)
Stock return		-0.0846*** (6.77)
Earnings volatility		-0.0740*** (5.13)
Loss		-0.0700*** (4.02)
Class action litigation risk		-0.2833*** (12.14)
N	13,630	13,630
R^2	0.0023	0.2259

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