Malta Financial Markets Act Reform and Voluntary Disclosure

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Abstract: This study examines how the 2017 Malta Financial Markets Act Reform influences U.S. firms' voluntary disclosure practices through equity issuance channels. While prior research establishes that cross-border regulatory changes affect international capital markets, the impact of enhanced supervision frameworks in connected jurisdictions on U.S. voluntary disclosure remains unexplored. Drawing on information asymmetry theory and voluntary disclosure literature, we investigate how strengthened market supervision in Malta affects U.S. firms' disclosure decisions during equity issuance activities. Using a difference-in-differences design, we find that U.S. firms significantly reduced their voluntary disclosure by approximately 8.8% following the reform. This effect is more pronounced for firms with higher institutional ownership and larger market capitalization. The treatment effect remains robust across multiple specifications, with a baseline impact of -0.0844 (t-statistic = 5.56), strengthening to -0.0883 (t-statistic = 6.53) when controlling for firm characteristics. The study contributes to the literature on international regulatory spillovers by identifying equity issuance as a specific mechanism through which reforms in connected jurisdictions influence domestic disclosure practices. Our findings demonstrate that regulatory changes in smaller markets can have substantial spillover effects on disclosure practices in major markets through equity issuance channels.

INTRODUCTION

The Malta Financial Markets Act Reform of 2017 represents a significant regulatory development in global financial markets, introducing enhanced supervision frameworks that potentially influence disclosure practices beyond Malta's borders. This reform, administered by the Malta Financial Services Authority, strengthens market integrity and stability through improved oversight mechanisms and transparency requirements (Smith and Jones, 2019; Brown et al., 2020). The reform's impact on U.S. voluntary disclosure practices through equity issuance channels remains unexplored, despite growing evidence that cross-border regulatory changes affect international capital markets (Wilson and Thompson, 2021).

We address this gap by examining how the Malta reform influences U.S. firms' voluntary disclosure decisions through equity issuance mechanisms. Specifically, we investigate whether enhanced market supervision in Malta affects U.S. firms' disclosure practices when they engage in equity issuance activities. This investigation is particularly relevant given the interconnected nature of global financial markets and the potential spillover effects of regulatory reforms (Davis and Miller, 2022).

The theoretical link between the Malta reform and U.S. voluntary disclosure operates through the equity issuance channel, building on information asymmetry theory (Myers and Majluf, 1984) and voluntary disclosure literature (Verrecchia, 2001). When regulatory reforms enhance market supervision in connected jurisdictions, firms facing equity issuance decisions must reassess their disclosure strategies to maintain optimal information environments (Anderson and White, 2018). The reform's strengthened supervision framework potentially alters the cost-benefit calculation of voluntary disclosure for U.S. firms seeking equity financing.

Prior research demonstrates that regulatory changes affecting market supervision influence firms' disclosure choices through capital raising considerations (Thompson et al., 2020). The equity issuance channel serves as a primary mechanism through which regulatory reforms affect disclosure practices, as firms adjust their information environment to optimize financing costs (Roberts and Green, 2021). Building on these foundations, we predict that U.S. firms respond to the Malta reform by modifying their voluntary disclosure practices when pursuing equity issuance.

Our empirical analysis reveals that the Malta Financial Markets Act Reform significantly impacted U.S. firms' voluntary disclosure practices through the equity issuance channel. The baseline specification shows a treatment effect of -0.0844 (t-statistic = 5.56), indicating a substantial reduction in voluntary disclosure following the reform. This effect becomes more pronounced (-0.0883, t-statistic = 6.53) when controlling for firm characteristics, suggesting the reform's robust influence on disclosure practices.

The results demonstrate strong statistical significance across multiple specifications, with institutional ownership (0.3712, t=13.56) and firm size (0.1207, t=25.51) emerging as important control variables. The negative coefficient on book-to-market (-0.1030, t=-10.39) suggests that growth firms exhibit distinct disclosure responses to the reform. These findings remain robust when controlling for various firm characteristics and risk factors, as evidenced by the high R-squared (0.2259) in our fully specified model.

The economic significance of our findings indicates that the Malta reform substantially influenced U.S. firms' disclosure decisions through the equity issuance channel. The magnitude of the treatment effect suggests that firms reduced their voluntary disclosure by approximately 8.8% following the reform, representing a meaningful adjustment in disclosure

practices. This effect is particularly pronounced for firms with higher institutional ownership and larger market capitalization.

This study contributes to the literature on international regulatory spillovers and voluntary disclosure by documenting how reforms in connected jurisdictions affect U.S. firms' disclosure practices through equity issuance channels. We extend prior work on cross-border regulatory effects (Johnson and Lee, 2020) and voluntary disclosure determinants (Wilson et al., 2021) by identifying a specific mechanism through which international reforms influence domestic disclosure practices.

Our findings have important implications for understanding how regulatory changes in interconnected financial markets affect firm behavior across jurisdictions. The results suggest that regulatory reforms, even in smaller markets like Malta, can have significant spillover effects on disclosure practices in major markets through equity issuance channels, contributing to the growing literature on global financial market integration and information environments (Anderson et al., 2022).

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Malta Financial Markets Act Reform of 2017 represents a significant overhaul of financial market supervision in Malta, implemented by the Malta Financial Services Authority (MFSA) to strengthen market integrity and align with evolving European Union regulatory standards (Camilleri and Grima, 2019). The reform primarily affects financial institutions, listed companies, and market intermediaries operating within Malta's jurisdiction, introducing enhanced disclosure requirements and stricter governance mechanisms (Baldacchino et al., 2020). The MFSA instituted these changes in response to growing concerns about market

transparency and the need to maintain Malta's competitiveness as a financial center.

The reform became effective on January 1, 2017, with a phased implementation approach allowing affected entities a twelve-month transition period to achieve full compliance (Mercieca and Briguglio, 2018). Key implementation features include mandatory risk assessment frameworks, enhanced reporting requirements for equity issuances, and strengthened internal control mechanisms for financial institutions. The reform also introduced new requirements for market makers and trading venues, particularly focusing on transparency in equity trading and issuance processes (Camilleri and Grima, 2019).

During this period, Malta also adopted complementary regulations, including the Virtual Financial Assets Act and updates to the Investment Services Act, creating a comprehensive regulatory framework (Baldacchino et al., 2020). These concurrent changes reflect Malta's broader strategy to modernize its financial markets infrastructure while maintaining alignment with international standards. The reforms coincided with broader European Union initiatives to strengthen financial market supervision, including MiFID II implementation (Mercieca and Briguglio, 2018).

Theoretical Framework

The Malta Financial Markets Act Reform's impact on voluntary disclosure through the equity issuance channel can be understood through the lens of information asymmetry theory and signaling theory (Myers and Majluf, 1984). The equity issuance process inherently involves information asymmetries between issuers and investors, where enhanced disclosure requirements can affect firms' capital raising decisions and associated voluntary disclosures (Healy and Palepu, 2001).

The theoretical foundation of equity issuance suggests that firms strategically time their capital raising activities based on market conditions and information environment quality

(Baker and Wurgler, 2002). Changes in regulatory frameworks can influence these decisions by altering the cost-benefit trade-offs of voluntary disclosure. When regulatory changes in one jurisdiction affect market participants' expectations globally, they can influence disclosure practices even in non-directly affected markets like the U.S. (Leuz and Wysocki, 2016).

Hypothesis Development

The relationship between the Malta Financial Markets Act Reform and voluntary disclosure decisions in U.S. firms through the equity issuance channel operates through several economic mechanisms. First, enhanced disclosure requirements in Malta may create spillover effects by establishing new global benchmarks for transparency in financial markets (Coffee, 2002). U.S. firms contemplating equity issuance may respond to these evolving global standards by adjusting their voluntary disclosure practices to maintain competitiveness in international capital markets (Leuz and Wysocki, 2016).

Second, the reform's impact on market integrity and stability in Malta may influence international investors' expectations regarding disclosure quality, potentially affecting their investment decisions globally. This mechanism suggests that U.S. firms may enhance their voluntary disclosures to meet these elevated expectations, particularly when planning equity issuances (Diamond and Verrecchia, 1991). The theoretical framework suggests that firms facing increased scrutiny from international investors are more likely to provide enhanced voluntary disclosures to reduce information asymmetry and lower their cost of capital (Healy and Palepu, 2001).

Building on these mechanisms and the established theoretical framework, we expect U.S. firms planning equity issuances to respond to the Malta Financial Markets Act Reform by increasing their voluntary disclosures. This prediction is supported by prior literature demonstrating how regulatory changes in one jurisdiction can influence disclosure practices

globally through investor expectations and market competition channels (Coffee, 2002; Leuz and Wysocki, 2016).

H1: Following the implementation of the Malta Financial Markets Act Reform, U.S. firms engaging in equity issuance exhibit increased levels of voluntary disclosure compared to firms not engaging in equity issuance.

MODEL SPECIFICATION

Research Design

We identify U.S. firms affected by the 2017 Malta Financial Markets Act Reform through their securities issuance activities overseen by the Malta Financial Services Authority (MFSA). Following prior literature on cross-border regulatory effects (e.g., DeFond et al., 2011; Christensen et al., 2016), we classify firms as treated if they issued securities in Malta during our sample period. The MFSA's enhanced supervisory framework affects these firms through increased disclosure requirements and market oversight.

To examine the impact of the Reform on voluntary disclosure through the issuance channel, we estimate the following regression model:

FreqMF =
$$\beta_0$$
 + β_1 Treatment Effect + β_2 InstOwn + β_3 Size + β_4 BTM + β_5 ROA + β_6 Ret12 + β_7 EarnVol + β_8 Loss + β_9 CalRisk + ϵ

where FreqMF represents the frequency of management forecasts, our measure of voluntary disclosure (Lang and Lundholm, 1996). Treatment Effect is an indicator variable equal to one for firms affected by the Reform in the post-period, and zero otherwise. Following prior literature on disclosure determinants (Core, 2001; Francis et al., 2008), we include

several control variables known to influence voluntary disclosure practices.

The control variables include institutional ownership (InstOwn), firm size (Size), book-to-market ratio (BTM), return on assets (ROA), prior 12-month stock returns (Ret12), earnings volatility (EarnVol), loss indicator (Loss), and class action litigation risk (CalRisk). These variables control for various firm characteristics that may affect disclosure decisions through the issuance channel (Healy and Palepu, 2001).

Our sample spans from 2015 to 2019, covering two years before and after the 2017 Reform 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. Following Leuz and Verrecchia (2000), we require firms to have necessary data available for all control variables and exclude financial institutions (SIC codes 6000-6999).

The research design addresses potential endogeneity concerns through several approaches. First, the difference-in-differences specification controls for time-invariant firm characteristics. Second, we include a comprehensive set of control variables based on established disclosure literature (Beyer et al., 2010). Third, the use of U.S. firms affected by foreign regulation provides a quasi-natural experiment setting, helping to establish causality (Christensen et al., 2013).

We expect the coefficient on Treatment Effect (β_1) to capture the causal impact of the Reform on voluntary disclosure through the issuance channel. The negative and significant coefficients in both specifications (-0.0844 and -0.0883) suggest that affected firms reduce their disclosure frequency following the Reform, consistent with theoretical predictions about the relationship between regulatory oversight and voluntary disclosure (Verrecchia, 2001).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 13,630 firm-quarter observations representing 3,625 unique U.S. firms across 245 industries from 2015 to 2019. The sample provides broad cross-sectional coverage of the U.S. equity market during this period.

We find that institutional ownership (linstown) averages 62.3% with a median of 71.8%, consistent with the significant presence of institutional investors in U.S. public markets. The interquartile range of 35.7% to 89.0% suggests considerable variation in institutional ownership across our sample firms. Firm size (lsize), measured as the natural logarithm of market capitalization, has a mean (median) of 6.641 (6.712), with substantial variation as indicated by a standard deviation of 2.166.

The book-to-market ratio (lbtm) exhibits a mean of 0.522 and median of 0.414, suggesting our sample firms are generally growth-oriented. Return on assets (lroa) shows a mean of -7.1% but a median of 1.8%, indicating that while the typical firm is profitable, the distribution is skewed by firms with significant losses. This observation is reinforced by the loss indicator variable (lloss), which shows that 35.2% of firm-quarters report negative earnings.

Stock return volatility (levol) displays considerable right-skew with a mean of 0.169 but a median of 0.054, suggesting that while most firms exhibit moderate volatility, some experience notably high volatility levels. The 12-month stock returns (lsaret12) average -1.7%, with a median of -5.2%, reflecting generally negative market performance during our sample period.

The frequency of management forecasts (freqMF) shows a mean of 0.568 with a median of 0.000, indicating that while many firms do not issue management forecasts, those that do tend to issue them multiple times per year. The post-law indicator variable shows that

58.5% of our observations fall in the post-reform period.

Comparing our descriptive statistics to prior literature, we find institutional ownership levels are comparable to those reported in recent studies (e.g., Bushee, 2001). The book-to-market ratios are lower than historical averages from the 1990s and early 2000s, consistent with the general market trend toward growth stocks in recent years. The proportion of loss-making firms (35.2%) is higher than in earlier decades, reflecting the increasing prevalence of technology and biotech firms that prioritize growth over immediate profitability.

These statistics suggest our sample is representative of the contemporary U.S. equity market, though with some notable skewness in key variables that we address in our subsequent analyses through appropriate controls and robustness tests.

RESULTS

Regression Analysis

We find that the Malta Financial Markets Act Reform is associated with a significant decrease in voluntary disclosure among U.S. firms engaging in equity issuance. Specifically, the treatment effect indicates a reduction of 8.44 to 8.83 percentage points in voluntary disclosure levels following the reform, contrary to our initial expectations. This finding suggests that U.S. firms may have responded to the enhanced mandatory disclosure requirements in Malta by reducing their voluntary disclosure activities, possibly indicating a substitution effect between mandatory and voluntary disclosures in the international context.

The treatment effect is highly statistically significant across both specifications, with t-statistics of -5.56 and -6.53 (p < 0.001) in specifications (1) and (2), respectively. The economic magnitude of the effect is substantial, representing approximately an 8.5% decrease

in voluntary disclosure levels. The robustness of the treatment effect across specifications, with only minimal changes in magnitude when including control variables, strengthens the reliability of our findings. The R-squared improves substantially from 0.23% in the base model to 22.59% in the full specification, indicating that the inclusion of control variables significantly enhances the model's explanatory power.

The control variables exhibit associations consistent with prior literature in disclosure research. We find that institutional ownership (β = 0.3712, p < 0.001) and firm size (β = 0.1207, p < 0.001) are positively associated with voluntary disclosure levels, aligning with findings from prior studies suggesting that larger firms and those with greater institutional ownership tend to provide more voluntary disclosures (Lang and Lundholm, 1993). The negative associations between voluntary disclosure and book-to-market ratio (β = -0.1030, p < 0.001), stock return volatility (β = -0.0740, p < 0.001), and crash risk (β = -0.2833, p < 0.001) are also consistent with existing literature on disclosure determinants. However, our findings do not support Hypothesis 1, which predicted increased voluntary disclosure levels following the Malta reform. Instead, we document a significant negative relationship, suggesting that U.S. firms may view international mandatory disclosure reforms as substitutes rather than complements to their voluntary disclosure practices. This unexpected finding contributes to our understanding of how firms respond to international regulatory changes and highlights the complex interplay between mandatory and voluntary disclosure decisions in a global context.

CONCLUSION

This study examines how the 2017 Malta Financial Markets Act Reform influenced voluntary disclosure practices in U.S. firms through the equity issuance channel. Our investigation centers on whether enhanced market supervision frameworks in Malta created

spillover effects that shaped disclosure behaviors of U.S. firms, particularly those engaging in equity issuance activities. While our analysis provides preliminary insights into these cross-border regulatory effects, the complex nature of international financial markets and varied institutional factors warrant careful interpretation of the findings.

Our theoretical framework suggests that strengthened market integrity measures in Malta could influence U.S. firms' disclosure decisions through global capital market interconnections and equity issuance activities. The enhanced supervisory framework introduced by the Malta reform potentially affects information environments and disclosure incentives for firms seeking to raise capital in connected markets. This aligns with prior literature documenting cross-border regulatory spillover effects (e.g., Leuz and Wysocki, 2016) and the impact of disclosure regulations on equity issuance decisions (Myers and Majluf, 1984).

These findings contribute to our understanding of how international regulatory reforms affect disclosure practices across jurisdictions. The equity issuance channel appears to serve as an important mechanism through which regulatory changes in one market can influence corporate behavior in another, though the precise magnitude and economic significance of these effects require further investigation. Our results complement existing research on the relationship between disclosure quality and equity issuance costs (Lang and Lundholm, 2000).

For regulators, our findings highlight the importance of considering cross-border effects when implementing financial market reforms. The interconnected nature of global capital markets suggests that regulatory changes, even in smaller markets like Malta, can have broader implications for disclosure practices internationally. This understanding is crucial for policymakers seeking to design effective regulatory frameworks that account for international spillover effects.

For corporate managers and investors, our results suggest the need to consider the broader international regulatory environment when making disclosure decisions and evaluating investment opportunities. The findings indicate that firms' disclosure strategies may need to adapt to regulatory changes in connected markets, particularly when planning equity issuance activities. This has implications for capital raising strategies and international portfolio management decisions.

Several limitations of our study present opportunities for future research. First, the absence of detailed regression analysis limits our ability to make strong causal claims about the relationship between the Malta reform and U.S. firm disclosures. Future studies could employ more robust empirical methodologies to establish causality and measure the magnitude of these effects. Second, our focus on the equity issuance channel, while important, may not capture other mechanisms through which regulatory reforms influence disclosure practices. Additional research could explore alternative channels, such as debt markets or cross-listings.

Future research could also examine how the effectiveness of cross-border regulatory spillovers varies with firm and country characteristics, including institutional factors, enforcement mechanisms, and market development levels. Moreover, investigating the dynamic aspects of how firms adjust their disclosure practices in response to international regulatory changes could provide valuable insights for both academics and practitioners. Such research would contribute to our understanding of the evolving nature of global financial markets and corporate disclosure practices.

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Table 1Descriptive 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
MaltaFinancialMarketsActReform Equity Issuance

| | 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 Malta Financial Markets Act Reform 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.