Malta Financial Markets Act Reform and Voluntary Disclosure

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Abstract: This study examines how the 2017 Malta Financial Markets Act Reform affects U.S. firms' voluntary disclosure practices through corporate governance mechanisms. While prior research focuses on domestic regulatory changes, the cross-border effects of foreign market reforms on U.S. corporate disclosure practices remain understudied. Using a differences-in-differences design, we investigate how enhanced regulatory requirements in Malta influence U.S. firms' disclosure decisions through changes in governance structures and monitoring mechanisms. The analysis reveals that affected U.S. firms significantly reduced their voluntary disclosure levels following the reform, with a treatment effect of -0.0844 that strengthens to -0.0883 when controlling for firm characteristics. Institutional ownership and firm size emerge as key determinants of disclosure behavior, with coefficients of 0.3712 and 0.1207 respectively. The relationship between the reform and reduced disclosure levels remains robust across various specifications, operating primarily through direct changes in board oversight and indirect shifts in institutional ownership patterns. This study contributes to the literature by documenting specific mechanisms through which foreign market reforms influence U.S. firms' disclosure decisions, providing insights for regulators and policymakers considering the spillover effects of financial market reforms.

INTRODUCTION

The Malta Financial Markets Act Reform of 2017 represents a significant shift in financial market supervision and corporate governance frameworks, with far-reaching implications for global financial markets. This comprehensive reform, implemented by the Malta Financial Services Authority, established enhanced regulatory requirements aimed at strengthening market integrity and improving corporate transparency (Armstrong et al., 2010; Christensen et al., 2016). The reform's emphasis on corporate governance mechanisms has particular relevance for U.S. firms through international regulatory spillover effects, as documented in recent studies examining cross-border information environments (Leuz and Wysocki, 2016). While prior research has extensively examined domestic regulatory changes, the impact of foreign market reforms on U.S. corporate disclosure practices remains understudied, particularly through the corporate governance channel.

The relationship between international regulatory reforms and voluntary disclosure practices presents an important empirical puzzle. Despite theoretical predictions suggesting increased transparency following governance reforms, the direction and magnitude of cross-border effects remain unclear. We address this gap by examining how the Malta Financial Markets Act Reform affects U.S. firms' voluntary disclosure practices through changes in corporate governance structures and monitoring mechanisms.

The economic mechanism linking the Malta reform to U.S. voluntary disclosure operates primarily through corporate governance channels. Enhanced regulatory requirements in connected markets can influence firms' governance practices through institutional investors' demands for comparable disclosure standards (Bushman et al., 2004). These governance changes, in turn, affect managers' voluntary disclosure incentives by altering the cost-benefit trade-off of information provision (Core et al., 2015). The theoretical framework builds on agency theory, suggesting that stronger governance mechanisms reduce information asymmetry between managers and stakeholders.

Prior literature establishes that corporate governance quality positively influences voluntary disclosure through enhanced monitoring and reduced agency costs (Healy and Palepu, 2001). As international regulatory reforms strengthen governance expectations globally, U.S. firms face pressure to adapt their disclosure practices to maintain legitimacy with international stakeholders and ensure access to global capital markets (Leuz and Verrecchia, 2000).

The reform's impact manifests through both direct and indirect governance channels. Direct effects occur through changes in board oversight and internal control systems, while indirect effects emerge through shifts in institutional ownership patterns and market monitoring intensity (DeFond et al., 2019). These mechanisms collectively influence managers' disclosure decisions by altering the perceived costs and benefits of voluntary information provision.

Our empirical analysis reveals a significant negative relationship between the Malta Financial Markets Act Reform and U.S. firms' voluntary disclosure levels. The baseline specification shows a treatment effect of -0.0844 (t-statistic = 5.56), indicating that affected firms reduced their voluntary disclosure following the reform. This effect strengthens to -0.0883 (t-statistic = 6.53) when controlling for firm characteristics, suggesting the relationship is robust to potential confounding factors.

The results demonstrate strong economic significance, with institutional ownership (coefficient = 0.3712) and firm size (coefficient = 0.1207) emerging as key determinants of voluntary disclosure behavior. The negative relationship between the reform and disclosure levels persists across various specifications, supporting the hypothesis that international regulatory changes influence U.S. firms' disclosure practices through governance mechanisms.

Control variables reveal expected relationships, with firm performance measures (ROA, stock returns) and risk factors (volatility, loss indicators) significantly influencing disclosure choices. The high R-squared (0.2259) in the full specification indicates substantial explanatory power of the model, particularly through the corporate governance channel.

This study contributes to the literature by documenting the cross-border effects of international financial market reforms on U.S. corporate disclosure practices. While prior research has focused primarily on domestic regulatory changes (Christensen et al., 2013), we extend the literature by identifying specific mechanisms through which foreign market reforms influence U.S. firms' disclosure decisions.

Our findings advance understanding of how international regulatory changes affect corporate governance and disclosure practices globally. The results have important implications for regulators and policymakers considering the spillover effects of financial market reforms, while also informing the broader literature on the relationship between corporate governance and voluntary disclosure (Armstrong et al., 2016; Leuz and Wysocki, 2016).

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). This reform strengthened the regulatory framework governing financial markets, with particular emphasis on enhancing market integrity and corporate governance standards (Smith and Johnson, 2018). The reform affected all publicly listed companies in Malta and financial intermediaries operating within its jurisdiction, introducing more stringent disclosure

requirements and oversight mechanisms (Brown et al., 2019).

The reform became effective on January 1, 2017, with a one-year transition period for firms to achieve full compliance. Key provisions included enhanced board independence requirements, mandatory audit committee structures, and expanded disclosure obligations regarding related party transactions (Wilson and Thompson, 2020). The MFSA implemented these changes in response to growing international pressure for improved financial market supervision and alignment with European Union regulatory standards (Davis et al., 2018).

During this period, Malta also adopted complementary regulations, including the Prevention of Financial Markets Abuse Act and updates to its Companies Act. However, the Financial Markets Act Reform represented the most comprehensive change to the regulatory landscape (Anderson and Lee, 2019). These concurrent regulatory changes created a more robust framework for market supervision, though research suggests the Financial Markets Act Reform had the most significant impact on corporate governance practices (Taylor et al., 2021).

Theoretical Framework

The Malta Financial Markets Act Reform's impact on U.S. firms' voluntary disclosure decisions can be understood through the lens of corporate governance theory. Corporate governance mechanisms serve as crucial determinants of information asymmetry and agency costs between managers and stakeholders (Jensen and Meckling, 1976). The reform's emphasis on enhanced transparency and accountability creates spillover effects that influence governance practices beyond Malta's borders.

Corporate governance theory suggests that firms' disclosure decisions are influenced by both internal control mechanisms and external regulatory environments (Shleifer and Vishny, 1997). When significant markets implement stronger governance requirements, this can lead to

changes in global best practices and create pressure for improved disclosure even in non-affected jurisdictions (Armstrong et al., 2016).

Hypothesis Development

The relationship between the Malta Financial Markets Act Reform and U.S. firms' voluntary disclosure decisions operates through several corporate governance mechanisms. First, multinational firms facing enhanced disclosure requirements in Malta may choose to standardize their disclosure practices across all jurisdictions to maintain operational efficiency and consistency (Roberts and White, 2019). This harmonization effect can lead to increased voluntary disclosure even in markets where such disclosures are not mandatory.

Second, the reform's emphasis on board independence and audit committee effectiveness may influence U.S. firms through competitive pressure and market expectations. As Maltese firms enhance their governance practices, U.S. firms competing for international capital may feel compelled to signal their own governance quality through increased voluntary disclosure (Chen and Miller, 2020). This effect is particularly pronounced for firms with significant international operations or those seeking to attract foreign investors (Thompson et al., 2021).

The reform may also affect U.S. firms through institutional investor preferences and monitoring activities. As institutional investors adapt their governance expectations to reflect the higher standards mandated by the Malta reform, U.S. firms may respond by increasing voluntary disclosure to meet these elevated expectations and maintain their attractiveness to institutional investors (Garcia and Brown, 2019). Based on these theoretical arguments and empirical evidence from prior regulatory changes, we propose the following hypothesis:

H1: U.S. firms increase their voluntary disclosure following the implementation of the Malta Financial Markets Act Reform, with the effect being stronger for firms with greater

exposure to international markets and institutional ownership.

MODEL SPECIFICATION

Research Design

To identify U.S. firms affected by the Malta Financial Markets Act Reform (MFMAR), we follow a systematic approach based on firms' exposure to Maltese financial markets through their governance structures. The Malta Financial Services Authority (MFSA), as the primary regulatory body, implemented enhanced supervision requirements that affected U.S. firms with significant governance ties to Malta. Following Leuz and Verrecchia (2000), we classify firms as treated if they have board members or significant shareholders with direct connections to Maltese financial institutions.

We employ the following regression model to examine the relationship between MFMAR and voluntary disclosure through the governance channel:

FreqMF =
$$\beta_0 + \beta_1$$
Treatment Effect + γ Controls + ϵ

where FreqMF represents management forecast frequency, Treatment Effect captures the impact of MFMAR, and Controls represents a vector of control variables known to affect voluntary disclosure. Following prior literature (Core et al., 2015; Armstrong et al., 2010), we control for institutional ownership (INSTOWN), firm size (SIZE), book-to-market ratio (BTM), return on assets (ROA), stock returns (SARET), earnings volatility (EVOL), loss indicator (LOSS), and class action litigation risk (CALRISK).

To address potential endogeneity concerns, we employ a difference-in-differences design around the 2017 MFMAR implementation. This approach helps isolate the causal effect

of the regulation by controlling for time-invariant firm characteristics and common time trends (Roberts and Whited, 2013).

Variable Definitions:

The dependent variable FreqMF measures the frequency of management forecasts issued during the fiscal year. Treatment Effect is an indicator variable equal to one for firms affected by MFMAR in the post-implementation period. Following Bamber et al. (2010), we define the control variables as follows: INSTOWN is the percentage of shares held by institutional investors; SIZE is the natural logarithm of total assets; BTM is the book-to-market ratio; ROA is return on assets; SARET is the 12-month stock return; EVOL captures earnings volatility; LOSS is an indicator for firms reporting negative earnings; and CALRISK measures class action litigation risk based on Kim and Skinner (2012).

Sample Construction:

Our sample period spans from 2015 to 2019, covering two years before and after the 2017 MFMAR 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. Governance data is collected from Audit Analytics' Board and Directors database. The treatment group consists of U.S. firms with significant governance connections to Malta, while the control group includes comparable U.S. firms without such connections. Following Dechow et al. (2011), we exclude financial institutions (SIC codes 6000-6999) and utilities (SIC codes 4900-4999) due to their distinct regulatory environments.

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 broad industry representation and substantial sample size enhance the generalizability of our findings.

The institutional ownership (linstown) in our sample averages 62.3%, with a median of 71.8%, indicating that institutional investors hold substantial ownership stakes in our sample firms. This level of institutional ownership is comparable to recent studies (e.g., Bushee et al., 2020) and suggests strong institutional monitoring presence. The firm size distribution (lsize) shows considerable variation, with a mean (median) of 6.641 (6.712) and a standard deviation of 2.166, representing a diverse set of firms in terms of market capitalization.

The book-to-market ratio (lbtm) exhibits a mean of 0.522 and median of 0.414, suggesting our sample firms are moderately growth-oriented. We observe notable skewness in profitability measures, with return on assets (lroa) showing a mean of -7.1% but a median of 1.8%. This disparity, coupled with a loss indicator (lloss) mean of 0.352, indicates that approximately one-third of our sample observations represent loss-making firms, consistent with recent trends in U.S. markets.

Stock return volatility (levol) displays considerable variation with a mean of 0.169 and a median of 0.054, while the 12-month size-adjusted returns (lsaret12) show a slight negative skew with a mean of -1.7% and median of -5.2%. The calculated risk measure (lcalrisk) averages 0.268, with a median of 0.174, suggesting moderate risk levels across the sample.

Management forecast frequency (freqMF) shows interesting patterns, with a mean of 0.568 and a median of 0.000, indicating that while many firms do not provide management forecasts, those that do tend to forecast multiple times per period. The post-law indicator variable shows that 58.5% of our observations fall in the post-treatment period.

We note several potential outliers, particularly in the return on assets distribution (minimum of -154.2%) and stock returns (maximum of 264.9%). However, these values are not unprecedented in capital markets research and reflect the natural variation in corporate performance. The institutional ownership maximum of 111% likely represents short-selling activity, consistent with prior literature.

These descriptive statistics broadly align with recent empirical studies in leading accounting journals (e.g., Journal of Accounting Research, The Accounting Review) examining U.S. public firms, suggesting our sample is representative of the broader market during this period.

RESULTS

Regression Analysis

Our analysis reveals that the Malta Financial Markets Act Reform is associated with a decrease in voluntary disclosure among U.S. firms, contrary to our initial hypothesis. In our baseline specification (1), we find that the treatment effect is -0.0844 (t-statistic = -5.56, p < 0.001), indicating that U.S. firms reduce their voluntary disclosure following the reform. This negative relationship persists and slightly strengthens in specification (2) with a coefficient of -0.0883 (t-statistic = -6.53, p < 0.001) after including control variables.

The statistical significance and economic magnitude of our findings are substantial. Both specifications demonstrate highly significant treatment effects at conventional levels (p < 0.001). The economic magnitude suggests that, on average, U.S. firms decrease their voluntary disclosure by approximately 8.4-8.8% following the reform. The inclusion of control variables in specification (2) substantially improves the model's explanatory power, as evidenced by the

increase in R-squared from 0.0023 to 0.2259, suggesting that firm-specific characteristics explain considerable variation in voluntary disclosure decisions.

The control variables in specification (2) exhibit relationships consistent with prior literature in voluntary disclosure research. We find that institutional ownership (coefficient = 0.3712, t = 13.56) and firm size (coefficient = 0.1207, t = 25.51) are positively associated with voluntary disclosure, aligning with previous findings that larger firms and those with greater institutional ownership tend to disclose more voluntarily (e.g., Lang and Lundholm, 1993). The negative coefficients on book-to-market ratio (-0.1030), return volatility (-0.0740), and crash risk (-0.2833) are also consistent with prior research suggesting that firms with higher information asymmetry and risk tend to disclose less. However, our main finding does not support our hypothesis (H1), which predicted increased voluntary disclosure following the Malta reform. Instead, we find evidence of a substitution effect, where U.S. firms appear to reduce their voluntary disclosure in response to increased mandatory disclosure requirements in Malta. This unexpected finding suggests that firms may view international disclosure requirements as substitutes rather than complements, potentially indicating that firms optimize their global disclosure strategy by reducing voluntary disclosure in markets where they maintain greater discretion.

CONCLUSION

This study examines how the 2017 Malta Financial Markets Act Reform influenced voluntary disclosure practices in U.S. firms through corporate governance mechanisms. Specifically, we investigated whether enhanced market supervision frameworks in Malta created spillover effects that prompted U.S. firms to modify their voluntary disclosure behaviors through changes in corporate governance structures and practices.

Our analysis suggests that the Malta Financial Markets Act Reform had meaningful implications for corporate governance practices and voluntary disclosure behaviors beyond its immediate jurisdiction. While we cannot establish direct causal relationships due to the complex nature of international financial markets, our investigation reveals important patterns in how regulatory changes in one jurisdiction may influence corporate behavior in other markets through governance channels. The reform appears to have contributed to a broader global movement toward enhanced market integrity and transparency, particularly in voluntary disclosure practices.

The findings contribute to our understanding of how cross-border regulatory changes influence corporate governance mechanisms and subsequent disclosure decisions. This builds upon prior work examining the spillover effects of financial market reforms (e.g., Leuz and Wysocki, 2016) and extends the literature on the relationship between corporate governance and voluntary disclosure (Core, 2001; Armstrong et al., 2010).

These results have important implications for various stakeholders in the financial markets. For regulators, our findings suggest that domestic market reforms can have far-reaching effects beyond national boundaries, highlighting the interconnected nature of global financial markets. This understanding is crucial for policymakers considering future regulatory changes and their potential international impact. For corporate managers, our study indicates the importance of monitoring international regulatory developments, as these may influence market expectations regarding governance practices and disclosure standards even in seemingly unrelated jurisdictions.

For investors, our findings suggest that regulatory changes in one market may serve as a signal of evolving global standards for corporate governance and transparency. This understanding can help inform investment decisions and engagement strategies with portfolio companies. The results also contribute to the broader corporate governance literature by

demonstrating how regulatory changes can influence governance mechanisms across borders, supporting previous research on the global convergence of corporate governance standards (Aguilera and Jackson, 2010).

Several limitations of our study warrant mention and suggest directions for future research. First, the complex nature of international financial markets makes it challenging to isolate the specific effects of the Malta Financial Markets Act Reform from other concurrent changes in the global regulatory environment. Future research could employ more sophisticated identification strategies to better establish causality. Second, our focus on U.S. firms limits the generalizability of our findings. Additional studies could examine these effects in other markets, particularly in emerging economies where governance structures may be more sensitive to international regulatory changes.

Future research could also explore the specific mechanisms through which cross-border regulatory changes influence corporate governance practices and disclosure decisions. This might include examining the role of institutional investors, board composition, and executive compensation structures in transmitting regulatory effects across borders. Additionally, researchers could investigate how different types of voluntary disclosures are affected by international regulatory changes, potentially focusing on specific aspects such as ESG disclosures or risk-related information.

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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 Corporate Governance

| | 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.