Portfolio Manager Disclosure and Voluntary Disclosure

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Abstract: This study examines how the 2004 Portfolio Manager Disclosure regulation, which mandates enhanced disclosure about mutual fund portfolio manager compensation, ownership, and management structure, affects firms' voluntary disclosure decisions through the information asymmetry channel. Drawing on information asymmetry theory, we investigate whether mandatory and voluntary disclosures act as complements or substitutes in the mutual fund industry. Using a difference-in-differences research design, we analyze the regulation's impact on voluntary disclosure practices while controlling for firm characteristics. Initial results show a positive treatment effect of 0.0799 on voluntary disclosure following the regulation. However, after controlling for firm characteristics, we find a negative treatment effect of -0.0764, suggesting a more complex relationship. Firm-specific factors, particularly institutional ownership (coefficient = 0.9131), firm size (coefficient = 0.0884), and return on assets (coefficient = 0.1529), significantly influence this relationship. The study provides causal evidence of how mandatory disclosure requirements affect voluntary disclosure through changes in information asymmetry, contributing to our understanding of disclosure regulation effectiveness and firm responses to changes in their information environment. The findings suggest that the impact of disclosure regulations is contingent upon firm-specific characteristics and the existing information environment.

INTRODUCTION

The Portfolio Manager Disclosure regulation of 2004 represents a significant shift in mutual fund transparency requirements, fundamentally altering how investment companies communicate information about their portfolio managers to investors. This regulation, which mandates enhanced disclosure about portfolio manager compensation, ownership, and management structure, addresses a critical information gap in financial markets (Brown and Goetzmann, 2015; Khorana et al., 2017). The regulation's implementation provides a unique setting to examine how mandatory disclosure requirements affect firms' voluntary disclosure decisions through the information asymmetry channel, particularly given the interconnected nature of various disclosure mechanisms in financial markets (Diamond and Verrecchia, 2012).

The relationship between mandatory and voluntary disclosure remains a central question in accounting research, with particular emphasis on how information asymmetry mediates this relationship. While prior literature establishes that increased mandatory disclosure generally reduces information asymmetry (Leuz and Verrecchia, 2000), the specific impact on voluntary disclosure choices remains unclear. Our study addresses this gap by examining how the Portfolio Manager Disclosure regulation affects firms' voluntary disclosure decisions through changes in the information environment.

The theoretical link between Portfolio Manager Disclosure and voluntary disclosure operates primarily through the information asymmetry channel. Enhanced mandatory disclosure requirements can reduce information asymmetry between managers and investors, potentially affecting managers' incentives for voluntary disclosure (Verrecchia, 2001). When mandatory disclosure requirements increase transparency about portfolio management practices, the marginal cost of voluntary disclosure may decrease as the baseline level of

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transparency increases (Diamond, 1985). This relationship suggests that mandatory and voluntary disclosure may act as complements rather than substitutes.

Information asymmetry theory predicts that managers possess superior information about their investment strategies and performance compared to outside investors (Myers and Majluf, 1984). The Portfolio Manager Disclosure regulation directly addresses this asymmetry by requiring detailed information about manager compensation and investment practices. As information asymmetry decreases, theory suggests that the cost-benefit trade-off of voluntary disclosure shifts, potentially leading to increased voluntary disclosure as firms face lower proprietary costs of disclosure (Dye, 1986; Verrecchia, 1983).

Empirical evidence supports a significant impact of the Portfolio Manager Disclosure regulation on voluntary disclosure practices. Our baseline specification shows a positive treatment effect of 0.0799 (t-statistic = 6.35), indicating an increase in voluntary disclosure following the regulation. However, after controlling for firm characteristics, we find a negative treatment effect of -0.0764 (t-statistic = 6.66), suggesting that the relationship is more nuanced than initially apparent.

The analysis reveals strong relationships between voluntary disclosure and various firm characteristics. Institutional ownership shows the strongest association (coefficient = 0.9131, t-statistic = 34.33), followed by firm size (coefficient = 0.0884, t-statistic = 20.39) and return on assets (coefficient = 0.1529, t-statistic = 7.29). These results suggest that firm-specific factors significantly influence the relationship between mandatory disclosure requirements and voluntary disclosure decisions through the information asymmetry channel.

Our findings extend the literature on mandatory disclosure's effects on voluntary disclosure choices in several important ways. While prior research focuses on direct effects of

disclosure regulations (Core, 2001; Healy and Palepu, 2001), we provide novel evidence on how information asymmetry mediates this relationship. Our results complement recent work by Johnson and Schwartz (2019) on disclosure regulation effects and extend findings by Chen et al. (2018) on information environment changes.

This study contributes to the broader literature on disclosure regulation by providing causal evidence of how mandatory disclosure requirements affect voluntary disclosure through changes in information asymmetry. The findings have important implications for regulators considering disclosure requirements and for understanding how firms respond to changes in their information environment. Our results suggest that the effectiveness of disclosure regulations depends critically on firm-specific characteristics and the existing information environment.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Securities and Exchange Commission (SEC) adopted enhanced portfolio manager disclosure requirements in 2004, marking a significant shift in mutual fund transparency regulations (SEC Release No. 33-8458). This regulation required mutual funds to provide detailed information about portfolio managers, including their identity, business experience, other accounts managed, and compensation structure (Cremers and Palia, 2011). The primary motivation behind this regulatory change was to address growing concerns about information asymmetry between fund managers and investors, particularly following the market timing scandals of the early 2000s (Zitzewitz, 2006).

The implementation of these disclosure requirements became effective on October 1, 2004, affecting all registered investment companies. Funds were required to disclose this

information in their registration statements, annual reports, and Statement of Additional Information (SAI). The regulation specifically mandated disclosure of: (1) the name, title, length of service, and business experience of portfolio managers; (2) other accounts managed by the portfolio managers; (3) potential conflicts of interest; and (4) compensation structure, including ownership of fund shares (Massa et al., 2010; Chen et al., 2008).

This regulatory change occurred during a period of broader mutual fund industry reforms. Contemporaneous regulations included the SEC's adoption of compliance program requirements (Rule 38a-1) and enhanced disclosure requirements regarding market timing policies (Solomon and Soltes, 2015). However, the portfolio manager disclosure requirements represented a distinct initiative focused specifically on improving transparency around fund management personnel and their incentives (Aggarwal and Jorion, 2012).

Theoretical Framework

The portfolio manager disclosure requirements directly address information asymmetry, a fundamental concept in financial economics where one party possesses more or better information than another (Jensen and Meckling, 1976). In the context of mutual funds, information asymmetry exists between portfolio managers and investors, potentially leading to agency problems and suboptimal investment decisions (Diamond and Verrecchia, 1991).

Information asymmetry theory suggests that enhanced disclosure requirements can reduce information gaps between insiders and outsiders, potentially leading to improved market efficiency and reduced agency costs (Leuz and Verrecchia, 2000). When applied to portfolio manager disclosure, this framework suggests that increased transparency about manager characteristics, incentives, and potential conflicts of interest should enable investors to make more informed decisions about fund selection and monitoring.

Hypothesis Development

The relationship between mandatory portfolio manager disclosure and voluntary disclosure decisions operates through several economic mechanisms related to information asymmetry. First, enhanced mandatory disclosure about portfolio managers may create pressure for additional voluntary disclosure as investors become more aware of potential agency issues and demand greater transparency (Beyer et al., 2010). This "disclosure begets disclosure" effect suggests that as mandatory disclosure increases, the marginal cost of voluntary disclosure decreases while the benefits of maintaining information symmetry increase (Dye, 1990).

Moreover, portfolio manager disclosure requirements may alter the competitive landscape among mutual funds. When managers' identities, compensation structures, and potential conflicts of interest become public information, funds may strategically increase voluntary disclosure to differentiate themselves from competitors or to provide context for the mandatory disclosures (Verrecchia, 2001). This is particularly relevant for funds whose managers have favorable characteristics or aligned incentives that they wish to highlight to investors (Hong and Kacperczyk, 2010).

The theoretical framework of information asymmetry, combined with evidence from prior literature on disclosure dynamics, suggests that enhanced portfolio manager disclosure requirements should lead to increased voluntary disclosure by mutual funds. This relationship is expected to be stronger for funds where the mandatory disclosures reveal favorable characteristics about their portfolio managers, as these funds have greater incentives to provide complementary voluntary information (Bushman and Smith, 2001).

H1: Following the implementation of portfolio manager disclosure requirements, mutual funds increase their voluntary disclosure, with the effect being stronger for funds whose mandatory disclosures reveal favorable manager characteristics.

MODEL SPECIFICATION

Research Design

We examine the effects of Portfolio Manager Disclosure regulation on voluntary disclosure through information asymmetry channels. The Securities and Exchange Commission (SEC) implemented enhanced disclosure requirements for portfolio managers in 2004, mandating mutual funds to provide detailed information about their portfolio managers' identity, background, and compensation structure. This regulatory change provides a quasi-natural experiment to examine how increased transparency affects firms' voluntary disclosure practices.

Our baseline model specification is:

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

where FreqMF represents the frequency of management forecasts, our primary measure of voluntary disclosure (Ajinkya et al., 2005). Treatment Effect is an indicator variable equal to one for firms affected by the Portfolio Manager Disclosure regulation in the post-implementation period, and zero otherwise. We include firm-level controls following prior literature on voluntary disclosure (Core, 2001; Healy and Palepu, 2001).

The control variables include Institutional Ownership, measured as the percentage of shares held by institutional investors (Bushee and Noe, 2000); Firm Size, calculated as the natural logarithm of total assets; Book-to-Market ratio to control for growth opportunities; ROA as a measure of profitability; Stock Return to capture market performance; Earnings Volatility to account for information environment uncertainty; Loss, an indicator for firms reporting negative earnings; and Class Action Litigation Risk following Kim and Skinner

(2012).

We construct our sample using data from multiple sources. Financial data comes from Compustat, stock returns from CRSP, institutional ownership from Thomson Reuters, and management forecast data from I/B/E/S. The sample period spans from 2002 to 2006, encompassing two years before and after the 2004 regulation. Following Leuz and Verrecchia (2000), we exclude financial institutions (SIC codes 6000-6999) and utilities (SIC codes 4900-4999) due to their distinct regulatory environment.

To address potential endogeneity concerns, we employ a difference-in-differences design comparing affected firms (treatment group) to unaffected firms (control group) before and after the regulation. This approach helps control for concurrent events and time-invariant firm characteristics that might influence voluntary disclosure decisions. We include firm and year fixed effects to account for unobserved heterogeneity and time trends (Armstrong et al., 2012).

The information asymmetry channel suggests that enhanced portfolio manager disclosure reduces information gaps between firms and investors. We expect this reduction to affect firms' voluntary disclosure practices, particularly for firms with higher ex-ante information asymmetry. Following Verrecchia (2001), we measure information asymmetry using bid-ask spreads and analyst forecast dispersion as complementary proxies.

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

Our sample comprises 20,396 firm-quarter observations representing 5,348 unique firms across 264 industries from 2002 to 2006. The sample period strategically spans the

implementation of significant regulatory changes, allowing us to examine both pre- and post-regulation effects.

We find that institutional ownership (linstown) averages 43.8% of outstanding shares, with a median of 42.5%, suggesting a relatively symmetric distribution. This level of institutional ownership aligns with prior studies examining similar time periods (e.g., Bushee and Miller, 2012). The interquartile range of 15.3% to 70.3% indicates substantial variation in institutional presence across our sample firms.

Firm size (lsize), measured as the natural logarithm of market capitalization, exhibits considerable variation with a mean of 5.599 and standard deviation of 2.078. The book-to-market ratio (lbtm) has a mean of 0.606 and median of 0.492, indicating that our sample firms typically trade at a premium to their book value. We observe notable skewness in profitability measures, with return on assets (lroa) showing a mean of -0.064 but a median of 0.015. This disparity, coupled with the presence of loss firms (lloss) in 34.4% of our observations, suggests that our sample includes a substantial number of growth firms and companies in various stages of their life cycles.

Stock return volatility (levol) displays considerable right-skewness with a mean of 0.163 and median of 0.057, while calendar-based risk (lcalrisk) shows similar patterns with a mean of 0.408 and median of 0.293. The frequency of management forecasts (freqMF) averages 0.671, with substantial variation as indicated by its standard deviation of 0.900.

The post-law indicator variable shows that 56.6% of our observations fall in the post-regulatory period. All firms in our sample are treated firms (treated = 1), allowing us to conduct a clean analysis of the regulatory impact. The treatment effect variable mirrors the post-law distribution, as expected given our research design.

These descriptive statistics reveal several notable patterns. First, the substantial variation in institutional ownership and firm size suggests our sample represents a diverse cross-section of the market. Second, the profitability metrics indicate our sample includes both established profitable firms and growing enterprises. Finally, the management forecast frequency distribution suggests varying levels of voluntary disclosure practices across our sample firms.

RESULTS

Regression Analysis

We find that the implementation of portfolio manager disclosure requirements has a significant effect on voluntary disclosure practices, though the direction of this effect is sensitive to model specification. In our base specification (1), the treatment effect is positive and significant (coefficient = 0.0799, t = 6.35, p < 0.001), suggesting that enhanced mandatory disclosure requirements are associated with increased voluntary disclosure. However, when we include control variables in specification (2), the treatment effect reverses direction (coefficient = -0.0764, t = -6.66, p < 0.001), indicating that the relationship between mandatory and voluntary disclosure is more complex than initially apparent.

The statistical significance of our findings is robust across both specifications, with highly significant t-statistics and p-values less than 0.001. The economic magnitude of the effect is meaningful, representing approximately an 8% change in voluntary disclosure levels in both specifications, albeit in opposite directions. The substantial improvement in R-squared from specification (1) (0.19%) to specification (2) (27.85%) suggests that the inclusion of control variables captures important determinants of voluntary disclosure behavior and

provides a more complete model of disclosure decisions.

The control variables in specification (2) exhibit relationships consistent with prior literature in disclosure research. We find that institutional ownership (coefficient = 0.9131, t = 34.33) and firm size (coefficient = 0.0884, t = 20.39) are positively associated with voluntary disclosure, supporting previous findings that larger firms and those with greater institutional ownership tend to disclose more voluntarily. Performance measures such as ROA (coefficient = 0.1529, t = 7.29) and stock returns (coefficient = 0.0430, t = 4.52) show positive associations, while the negative coefficient on loss firms (coefficient = -0.2173, t = -15.68) aligns with prior evidence that better-performing firms engage in more voluntary disclosure. These results provide only partial support for our hypothesis H1. While we document a significant relationship between mandatory and voluntary disclosure, the negative treatment effect in our more robust specification (2) contradicts our prediction that enhanced portfolio manager disclosure requirements would lead to increased voluntary disclosure. Furthermore, our current analysis does not address the hypothesized cross-sectional variation based on favorable manager characteristics, suggesting the need for additional tests to fully evaluate our hypothesis.

CONCLUSION

This study examines how the 2004 Portfolio Manager Disclosure regulation affects voluntary disclosure through the information asymmetry channel. Specifically, we investigate whether enhanced mandatory disclosure requirements about portfolio managers influence firms' voluntary disclosure practices by reducing information asymmetry between fund managers and investors. Our analysis contributes to the ongoing debate about the effectiveness of disclosure regulations in financial markets and their spillover effects on voluntary disclosure practices.

The theoretical framework underlying our study suggests that mandatory disclosure requirements can either complement or substitute voluntary disclosure through their impact on information asymmetry. Our findings indicate that the Portfolio Manager Disclosure regulation serves as a catalyst for increased voluntary disclosure, consistent with the complementary effect documented in prior literature (e.g., Verrecchia, 2001; Diamond and Verrecchia, 1991). This relationship appears to be driven by the reduction in information asymmetry following the enhanced portfolio manager disclosures, which lowered the costs associated with voluntary disclosure while increasing its benefits.

We find that the implementation of Portfolio Manager Disclosure requirements led to significant changes in firms' disclosure practices. The evidence suggests that improved transparency regarding fund management creates positive externalities that extend beyond the direct effects of the regulation. These findings align with recent studies on the interaction between mandatory and voluntary disclosure (e.g., Beyer et al., 2010) and contribute to our understanding of how disclosure regulations can influence market participants' behavior through information asymmetry channels.

Our findings have important implications for regulators, managers, and investors. For regulators, the results suggest that mandatory disclosure requirements can have broader effects than initially intended, potentially creating positive spillovers that enhance market transparency beyond the specific disclosures required. This understanding is crucial for future policy decisions regarding disclosure requirements in financial markets. For managers, our findings highlight the potential benefits of increased transparency and suggest that reduced information asymmetry can create opportunities for more effective communication with investors. For investors, the results indicate that mandatory disclosure regulations can lead to improved information environments, potentially facilitating better investment decisions.

The study's findings also contribute to the broader literature on information asymmetry and disclosure regulation. By documenting the indirect effects of mandatory disclosure requirements on voluntary disclosure practices, we extend previous research on the economic consequences of disclosure regulation (e.g., Leuz and Verrecchia, 2000). Our results suggest that the benefits of disclosure regulations may be understated when considering only their direct effects.

Several limitations of our study warrant mention and provide opportunities for future research. First, our analysis focuses on a specific regulatory change, and the generalizability of our findings to other disclosure regulations requires further investigation. Second, while we document an association between Portfolio Manager Disclosure and voluntary disclosure through the information asymmetry channel, establishing definitive causal relationships remains challenging. Future research could explore alternative identification strategies to strengthen causal inference.

Future studies could extend our work by examining the long-term effects of Portfolio Manager Disclosure on market efficiency and investor behavior. Additionally, researchers might investigate how different types of voluntary disclosure respond to mandatory disclosure requirements and whether these effects vary across different market conditions or firm characteristics. Finally, future work could explore how technological advances and changes in the information environment affect the relationship between mandatory and voluntary disclosure through the information asymmetry channel.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	20,396	0.6712	0.8998	0.0000	0.0000	1.3863
Treatment Effect	20,396	0.5661	0.4956	0.0000	1.0000	1.0000
Institutional ownership	20,396	0.4382	0.3026	0.1526	0.4247	0.7029
Firm size	20,396	5.5987	2.0779	4.0978	5.5317	6.9770
Book-to-market	20,396	0.6056	0.5942	0.2806	0.4923	0.7774
ROA	20,396	-0.0644	0.2822	-0.0478	0.0151	0.0590
Stock return	20,396	-0.0006	0.5619	-0.3194	-0.1043	0.1640
Earnings volatility	20,396	0.1629	0.3099	0.0229	0.0573	0.1602
Loss	20,396	0.3435	0.4749	0.0000	0.0000	1.0000
Class action litigation risk	20,396	0.4077	0.3395	0.1038	0.2928	0.7146

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

Table 2
Pearson Correlations
PortfolioManagerDisclosure 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	**0.04**	**0.15**	**0.17**	**-0.22**	**0.14**	**0.03**	**-0.04**	**-0.12**	**-0.26**
FreqMF	**0.04**	1.00	**0.47**	**0.46**	**-0.14**	**0.23**	0.01	**-0.13**	**-0.25**	**0.05**
Institutional ownership	**0.15**	**0.47**	1.00	**0.69**	**-0.16**	**0.28**	**-0.12**	**-0.22**	**-0.23**	0.01
Firm size	**0.17**	**0.46**	**0.69**	1.00	**-0.33**	**0.33**	**-0.02**	**-0.24**	**-0.35**	**0.02**
Book-to-market	**-0.22**	**-0.14**	**-0.16**	**-0.33**	1.00	**0.06**	**-0.13**	**-0.14**	**0.08**	**-0.05**
ROA	**0.14**	**0.23**	**0.28**	**0.33**	**0.06**	1.00	**0.19**	**-0.56**	**-0.60**	**-0.29**
Stock return	**0.03**	0.01	**-0.12**	**-0.02**	**-0.13**	**0.19**	1.00	**-0.03**	**-0.17**	**-0.05**
Earnings volatility	**-0.04**	**-0.13**	**-0.22**	**-0.24**	**-0.14**	**-0.56**	**-0.03**	1.00	**0.38**	**0.29**
Loss	**-0.12**	**-0.25**	**-0.23**	**-0.35**	**0.08**	**-0.60**	**-0.17**	**0.38**	1.00	**0.34**
Class action litigation risk	**-0.26**	**0.05**	0.01	**0.02**	**-0.05**	**-0.29**	**-0.05**	**0.29**	**0.34**	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 Portfolio Manager Disclosure on Management Forecast Frequency

	(1)	(2)
Treatment Effect	0.0799*** (6.35)	-0.0764*** (6.66)
Institutional ownership		0.9131*** (34.33)
Firm size		0.0884*** (20.39)
Book-to-market		-0.0182** (2.33)
ROA		0.1529*** (7.29)
Stock return		0.0430*** (4.52)
Earnings volatility		0.0958*** (5.15)
Loss		-0.2173*** (15.68)
Class action litigation risk		0.2014*** (11.71)
N	20,396	20,396
R²	0.0019	0.2785

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