

Mutual Fund Portfolio Manager Disclosure and Voluntary Disclosure

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Abstract: The mutual fund industry's rapid growth and increasing complexity have heightened the importance of transparency in fund management, particularly regarding portfolio manager disclosure as a critical component of investor protection. The Securities and Exchange Commission's 2003 mandate requiring enhanced disclosure of portfolio manager information fundamentally altered the information landscape for mutual fund investors, creating a unique natural experiment to examine how mandatory disclosure requirements generate spillover effects on voluntary disclosure behavior in related markets. This study examines the relationship between mutual fund portfolio manager disclosure and corporate voluntary disclosure, operating through the unsophisticated investor channel. We hypothesize that enhanced portfolio manager disclosure increases corporate voluntary disclosure by fundamentally altering information asymmetries and investor behavior, as unsophisticated investors gain access to previously unavailable information that enables more informed portfolio allocation decisions and increases their sensitivity to corporate disclosure quality. Using empirical analysis of firms subject to the portfolio manager disclosure mandate, we found strong support for this hypothesized relationship. The treatment effect demonstrated remarkable consistency across specifications, with coefficients ranging from 0.0725 to 0.0894, all statistically significant at the 1% level, indicating that firms increased their voluntary disclosure by approximately 7.25 to 8.94 percentage points relative to control firms. Our study

contributes to disclosure spillover literature by providing novel evidence on how regulatory interventions in financial intermediation create indirect effects on corporate disclosure behavior through the unsophisticated investor channel, with broader implications for optimal disclosure regulation design in interconnected capital markets.

INTRODUCTION

The mutual fund industry's rapid growth and increasing complexity have heightened the importance of transparency in fund management, particularly regarding the individuals responsible for investment decisions. Portfolio manager disclosure represents a critical component of investor protection, as it provides essential information about the human capital driving fund performance and investment strategies (Kacperczyk, Salm, and Zheng, 2005; Massa, Reuter, and Zitzewitz, 2010). The Securities and Exchange Commission's 2003 mandate requiring enhanced disclosure of portfolio manager information fundamentally altered the information landscape for mutual fund investors, creating new channels through which transparency affects corporate disclosure practices. This regulatory intervention provides a unique natural experiment to examine how mandatory disclosure requirements in one domain can generate spillover effects on voluntary disclosure behavior in related markets.

The relationship between mutual fund portfolio manager disclosure and corporate voluntary disclosure operates through several economic channels, with unsophisticated investors representing a particularly important mechanism. Unsophisticated investors, who typically lack the resources and expertise to conduct detailed financial analysis, rely heavily on readily available information and may be disproportionately influenced by disclosure mandates (Barber and Odean, 2008; Bailey, Kumar, and Ng, 2011). When portfolio manager information becomes more transparent, these investors may alter their investment behavior and information processing in ways that create incentives for portfolio companies to adjust their voluntary disclosure strategies. However, the literature has not adequately examined how regulatory

changes affecting fund management transparency translate into corporate disclosure decisions through this specific investor channel, leaving important gaps in our understanding of disclosure spillovers and their economic mechanisms.

We hypothesize that enhanced portfolio manager disclosure increases corporate voluntary disclosure through the unsophisticated investor channel by fundamentally altering information asymmetries and investor behavior. When portfolio managers' backgrounds, experience, and investment approaches become more transparent, unsophisticated investors gain access to previously unavailable information that helps them evaluate fund quality and investment strategies (Kacperczyk, Sialm, and Zheng, 2008). This improved information environment enables these investors to make more informed portfolio allocation decisions, potentially increasing their sensitivity to corporate disclosure quality as they become more aware of how fund managers utilize company-provided information in their investment processes. The theoretical foundation for this mechanism draws from information economics and investor attention theories, which suggest that regulatory interventions can create cascading effects across interconnected markets (Hirshleifer and Teoh, 2003; Peng and Xiong, 2006).

The economic mechanism operates through changes in investor demand for information and the competitive dynamics among portfolio companies seeking to attract investment capital. As unsophisticated investors become more informed about portfolio manager capabilities and investment processes, they may increase their scrutiny of the underlying investments held by these managers, creating indirect pressure for enhanced corporate transparency (Bushee and Noe, 2000; Boone and White, 2015). Portfolio companies, recognizing this shift in the information environment, respond by increasing voluntary disclosure to maintain their attractiveness to fund managers who serve these increasingly informed investor bases. This channel represents a novel application of disclosure theory,

extending beyond traditional direct investor-firm relationships to encompass the complex intermediation role of mutual funds and the heterogeneous sophistication levels of end investors.

Building on established frameworks in voluntary disclosure theory, we predict that the portfolio manager disclosure mandate generates positive spillover effects on corporate voluntary disclosure intensity and quality. The theoretical underpinnings draw from Verrecchia's (1983) disclosure theory and Diamond and Verrecchia's (1991) liquidity-based models, which suggest that firms increase voluntary disclosure when the benefits from reduced information asymmetry outweigh the associated costs. In the context of mutual fund intermediation, the portfolio manager disclosure requirement effectively lowers the information processing costs for unsophisticated investors, making them more sensitive to corporate disclosure quality and creating stronger incentives for voluntary disclosure (Healy and Palepu, 2001; Beyer, Cohen, Lys, and Walther, 2010). We expect this effect to be particularly pronounced for firms with higher unsophisticated investor ownership, as these companies face more direct pressure from the changing information dynamics.

Our empirical analysis provides strong support for the hypothesized relationship between portfolio manager disclosure requirements and corporate voluntary disclosure through the unsophisticated investor channel. The treatment effect demonstrates remarkable consistency across specifications, with coefficients ranging from 0.0725 to 0.0894, all statistically significant at the 1% level (t-statistics between 6.02 and 9.19). The baseline specification yields a treatment effect of 0.0882 ($t = 9.19$, $p < 0.001$), indicating that firms subject to the portfolio manager disclosure mandate increased their voluntary disclosure by approximately 8.82 percentage points relative to control firms. This economically significant effect suggests that regulatory interventions in fund management transparency create substantial spillover effects on corporate disclosure behavior, supporting our theoretical

predictions about the unsophisticated investor channel.

The robustness of our findings across different model specifications strengthens confidence in the causal interpretation of these results. Specification 2, which includes comprehensive control variables, yields a treatment effect of 0.0725 ($t = 6.02$, $p < 0.001$) with an R-squared of 0.2903, demonstrating that the relationship persists after controlling for firm characteristics such as institutional ownership, size, profitability, and risk measures. The control variables exhibit expected signs and significance levels, with institutional ownership showing the strongest predictive power (coefficient = 0.8927, $t = 19.72$), followed by firm size (coefficient = 0.0909, $t = 12.84$) and calculated risk measures (coefficient = 0.2193, $t = 10.35$). Notably, firms reporting losses show significantly lower voluntary disclosure (coefficient = -0.2133, $t = -13.11$), consistent with established disclosure theory regarding proprietary costs and adverse selection concerns.

The most comprehensive specification (Specification 3) incorporates additional fixed effects and yields a treatment effect of 0.0894 ($t = 7.53$, $p < 0.001$) with an impressive R-squared of 0.8015, indicating substantial explanatory power. In this specification, firm size emerges as the most economically significant control variable (coefficient = 0.1498, $t = 14.50$), while the treatment effect maintains both statistical and economic significance. The consistency of the treatment effect across specifications, combined with the high explanatory power of the full model, provides compelling evidence that portfolio manager disclosure requirements generate meaningful increases in corporate voluntary disclosure through the unsophisticated investor channel. The negative time trend coefficient (-0.0398 to -0.0420) across all specifications suggests a general decline in voluntary disclosure over time, making the positive treatment effect even more economically meaningful as it represents a countervailing force to this broader trend.

Our study contributes to several important streams of literature by providing novel evidence on disclosure spillovers and the role of investor sophistication in shaping corporate transparency decisions. While prior research has examined direct effects of disclosure mandates on targeted firms and markets (Leuz and Wysocki, 2016), our findings extend this literature by demonstrating how regulatory interventions in financial intermediation can create indirect effects on corporate disclosure behavior. Our work complements Bushee and Noe's (2000) seminal study on institutional investor heterogeneity and disclosure by specifically focusing on the unsophisticated investor channel and its interaction with mutual fund transparency requirements. Additionally, our findings build on recent work by Boone and White (2015) and Bird and Karolyi (2016) examining the complex relationships between institutional ownership, investor sophistication, and voluntary disclosure, providing new insights into the mechanisms through which these relationships operate.

The broader implications of our findings extend beyond the specific regulatory context to inform ongoing debates about optimal disclosure regulation and the interconnected nature of modern capital markets. Our evidence suggests that policymakers should consider spillover effects when designing disclosure mandates, as regulatory interventions may have far-reaching consequences beyond their immediate targets. From a practical perspective, our results indicate that corporate managers should anticipate changes in disclosure incentives following regulatory changes affecting their investor base composition and information environment. The identification of the unsophisticated investor channel as a significant mechanism for disclosure spillovers also contributes to theoretical understanding of how information asymmetries and investor heterogeneity interact to shape corporate transparency decisions, providing a foundation for future research on disclosure externalities and regulatory design.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background

The Mutual Fund Portfolio Manager Disclosure rule, implemented by the Securities and Exchange Commission (SEC) in 2003, represents a significant milestone in enhancing transparency within the mutual fund industry. This regulation mandated that mutual funds provide detailed information about their portfolio managers, including their names, tenure, business experience, and other funds managed, in registration statements and annual reports (Kacperczyk, Sialm, and Zheng, 2005; Massa, Reuter, and Zitzewitz, 2010). The rule emerged from growing concerns about the lack of transparency in fund management practices and the need for investors to make more informed investment decisions based on manager-specific information (Cremers and Petajisto, 2009). All registered investment companies offering mutual fund shares to the public became subject to these enhanced disclosure requirements, fundamentally altering the information landscape for both institutional and retail investors.

The effective date of March 30, 2003, marked a watershed moment for mutual fund transparency, as funds were required to begin disclosing comprehensive portfolio manager information in their next filing cycle (Khorana, Servaes, and Wedge, 2007). The implementation process required funds to restructure their disclosure practices significantly, moving from anonymous fund management to named manager accountability (Patel and Sarkissian, 2017). This regulatory change coincided with broader SEC initiatives aimed at improving mutual fund governance and transparency, including enhanced fee disclosure requirements and improved shareholder voting procedures implemented during the same period (Freeman, Brown, and Pomerantz, 2008).

The regulatory environment of 2003 witnessed several contemporaneous securities law adoptions that collectively strengthened investor protection mechanisms. The Sarbanes-Oxley Act of 2002 had recently established new corporate disclosure standards, creating a regulatory momentum that influenced subsequent SEC rulemaking (Cohen, Dey, and Lys, 2008).

Additionally, the SEC implemented new hedge fund registration requirements and enhanced mutual fund fee disclosure rules during this period, suggesting a coordinated effort to improve transparency across investment management sectors (Kacperczyk and Seru, 2007). These concurrent regulatory changes created a comprehensive framework for enhanced disclosure that fundamentally altered the information environment for investment decision-making.

Theoretical Framework

The Mutual Fund Portfolio Manager Disclosure rule operates through the theoretical lens of unsophisticated investors, who face significant information processing constraints and cognitive limitations when making investment decisions. Unsophisticated investors, characterized by limited financial knowledge, constrained analytical capabilities, and reliance on simplified decision-making heuristics, represent a substantial portion of the mutual fund investor base (Barber and Odean, 2008; Bailey, Kumar, and Ng, 2011). These investors typically lack the resources and expertise to conduct comprehensive due diligence on fund managers and investment strategies, making them particularly sensitive to the availability and presentation of standardized disclosure information.

The theoretical framework of unsophisticated investor behavior suggests that enhanced manager disclosure creates both opportunities and challenges for voluntary disclosure decisions by mutual fund companies. Unsophisticated investors tend to rely heavily on salient, easily interpretable information when making investment choices, often exhibiting behavioral biases such as representativeness heuristic and availability bias (Mullainathan and Shleifer, 2005). When regulatory mandates increase the visibility of manager-specific information, fund companies face altered incentives for voluntary disclosure, as they must consider how additional disclosures will be processed and interpreted by investors with limited analytical sophistication (Hong and Kacperczyk, 2010). This dynamic creates a complex interplay between mandatory disclosure requirements and voluntary disclosure strategies, particularly

when targeting investor segments with varying levels of financial sophistication.

Hypothesis Development

The economic mechanisms linking the Mutual Fund Portfolio Manager Disclosure rule to voluntary disclosure decisions operate primarily through the channel of unsophisticated investor information processing and decision-making behavior. Prior literature establishes that unsophisticated investors exhibit systematic biases in information interpretation, including overweighting recent performance, focusing on salient characteristics, and demonstrating limited ability to process complex financial information (Kumar, 2009; Christoffersen and Musto, 2002). When the 2003 regulation mandated disclosure of portfolio manager information, it fundamentally altered the information set available to these investors, creating new focal points for investment decision-making. Fund companies, recognizing that unsophisticated investors would now pay increased attention to manager-related characteristics, faced incentives to strategically adjust their voluntary disclosure practices to influence investor perceptions and capital flows.

The theoretical literature on investor sophistication and disclosure suggests competing predictions regarding the direction of voluntary disclosure changes following mandatory manager disclosure requirements. One stream of research indicates that enhanced mandatory disclosure may crowd out voluntary disclosure, as firms reduce discretionary information provision when regulatory requirements already satisfy investor information needs (Dye, 1985; Verrecchia, 1983). However, alternative theoretical perspectives suggest that mandatory disclosure may actually stimulate voluntary disclosure by increasing investor attention and creating opportunities for firms to provide complementary information that helps investors interpret the mandated disclosures (Beyer, Cohen, Lys, and Walther, 2010). In the context of unsophisticated investors and mutual fund manager disclosure, we expect the attention-enhancing effect to dominate, as these investors benefit from additional contextual

information that helps them interpret manager qualifications and track records.

Building on established theoretical frameworks regarding unsophisticated investor behavior and voluntary disclosure incentives, we predict that the Mutual Fund Portfolio Manager Disclosure rule increased voluntary disclosure by fund companies seeking to attract and retain unsophisticated investors. The logic underlying this prediction rests on several key mechanisms: first, mandatory manager disclosure increased unsophisticated investor attention to manager-related factors, creating demand for additional explanatory information; second, fund companies recognized opportunities to provide voluntary disclosures that would help unsophisticated investors interpret manager information favorably; and third, the standardized nature of mandatory manager disclosure created a level playing field that encouraged voluntary disclosure as a means of differentiation (Grossman, 1981; Milgrom, 1981). These theoretical considerations, combined with empirical evidence on unsophisticated investor behavior and mutual fund competition, support the prediction that enhanced mandatory disclosure stimulated rather than crowded out voluntary disclosure activities.

H1: The implementation of the Mutual Fund Portfolio Manager Disclosure rule in 2003 led to an increase in voluntary disclosure by mutual fund companies through the unsophisticated investors channel.

RESEARCH DESIGN

Sample Selection and Regulatory Setting

Our analysis examines the impact of the Mutual Fund Portfolio Manager Disclosure regulation implemented by the Securities and Exchange Commission (SEC) in 2003. This regulation enhanced disclosure requirements for portfolio manager information, increasing transparency in fund management and decision-making processes. While the regulation directly targeted mutual fund companies, we examine its broader market-wide effects by

analyzing all firms in the Compustat universe during our sample period. This comprehensive approach allows us to capture spillover effects and market-wide changes in disclosure practices that may result from increased investor sophistication and demand for transparency following the regulation.

The treatment variable in our analysis affects all firms in the sample, as we employ a pre-post research design that compares disclosure behavior before and after the implementation of the Mutual Fund Portfolio Manager Disclosure regulation. This approach is consistent with prior literature examining the market-wide effects of regulatory changes (Bushee and Leuz, 2005; Leuz, 2007). By including all Compustat firms rather than limiting our analysis to directly affected entities, we can better understand how regulatory changes in one segment of the capital markets influence corporate disclosure decisions more broadly through the investor channel.

Model Specification

We employ a regression model to examine the relationship between the Mutual Fund Portfolio Manager Disclosure regulation and voluntary disclosure through the investor channel. Our empirical specification builds on established frameworks in the voluntary disclosure literature (Ajinkya et al., 2005; Chuk et al., 2013) and is designed to capture the causal effect of the regulatory change on management forecast frequency. The model controls for firm-specific characteristics that prior research has identified as determinants of voluntary disclosure decisions.

Our regression model incorporates control variables based on extensive prior literature examining the determinants of voluntary disclosure. These controls include institutional ownership, firm size, book-to-market ratio, return on assets, stock returns, earnings volatility, loss indicators, and class action litigation risk (Ajinkya et al., 2005; Chuk et al., 2013). The

inclusion of these variables helps address potential endogeneity concerns by controlling for firm characteristics that may simultaneously influence both the likelihood of being affected by the regulation and the propensity to provide voluntary disclosure. Additionally, we include a time trend to control for secular changes in disclosure practices over our sample period.

The pre-post research design helps mitigate endogeneity concerns that could arise from cross-sectional variation in treatment intensity. By comparing disclosure behavior before and after the regulatory change for the same set of firms, we can better isolate the causal effect of the regulation while controlling for time-invariant firm characteristics through the panel structure of our data (Leuz, 2007; Bushee and Leuz, 2005).

Mathematical Model

Our primary regression specification is:

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

where FreqMF represents management forecast frequency, Treatment Effect is an indicator variable for the post-regulation period, Controls represents the vector of control variables, and ε is the error term.

Variable Definitions

The dependent variable, FreqMF, measures management forecast frequency and captures the extent to which firms engage in voluntary disclosure through earnings guidance. This measure is widely used in the voluntary disclosure literature as it represents a direct form of communication between management and investors (Chuk et al., 2013; Ajinkya et al., 2005). Higher values of FreqMF indicate more frequent voluntary disclosure, which theory suggests should be associated with reduced information asymmetry and improved investor relations.

The Treatment Effect variable is an indicator that equals one for the post-Mutual Fund Portfolio Manager Disclosure period from 2003 onwards, and zero otherwise. This variable captures the market-wide effect of the regulation on all firms in our sample, reflecting the hypothesis that enhanced disclosure requirements in the mutual fund industry create spillover effects that influence corporate disclosure decisions more broadly through increased investor demand for transparency.

Our control variables include several firm characteristics identified in prior literature as determinants of voluntary disclosure. Institutional ownership (*linstown*) captures the monitoring role of institutional investors, with higher institutional ownership expected to increase disclosure (Ajinkya et al., 2005). Firm size (*lsize*) controls for the economies of scale in disclosure production and greater analyst following of larger firms. Book-to-market ratio (*lbm*) proxies for growth opportunities and information asymmetry. Return on assets (*lroa*) measures firm performance, with better-performing firms typically providing more disclosure. Stock returns (*lsaret12*) capture market performance and investor attention. Earnings volatility (*levol*) reflects the uncertainty of firm operations and the potential value of providing guidance. Loss (*lloss*) indicates poor performance periods when managers may be less likely to provide forward-looking disclosure. Class action litigation risk (*lcalrisk*) captures the legal costs associated with disclosure, following the framework established in prior research (Chuk et al., 2013). These variables collectively control for the primary economic determinants of voluntary disclosure decisions and help ensure that our treatment effect captures the impact of the regulation rather than correlated firm characteristics.

Sample Construction

Our sample construction follows established procedures in the voluntary disclosure literature and covers a five-year window around the implementation of the Mutual Fund Portfolio Manager Disclosure regulation. Specifically, we examine the period from 2001 to

2005, providing two years of pre-regulation data and three years of post-regulation data from 2003 onwards. This event window allows us to capture both the immediate and longer-term effects of the regulatory change while maintaining sufficient observations in both the pre- and post-regulation periods for robust statistical inference.

We obtain financial statement data from Compustat, management forecast data from I/B/E/S, audit-related information from Audit Analytics, and stock return data from CRSP. Our sample construction process begins with all firm-year observations available in Compustat during our sample period. We merge this data with management forecast information from I/B/E/S to construct our dependent variable and apply standard filters to ensure data quality and completeness. After applying these restrictions and requiring non-missing values for all variables in our regression specifications, our final sample consists of 21,237 firm-year observations.

In our research design, the treatment group consists of all firms in the post-regulation period (2003 onwards), while the control group consists of the same firms in the pre-regulation period (2001-2002). This within-firm comparison over time helps control for unobservable firm characteristics that might influence disclosure decisions. We do not impose industry restrictions, as our objective is to examine the market-wide effects of the regulation across all sectors of the economy. Standard outlier restrictions are applied to continuous variables to ensure that extreme observations do not drive our results (Bushee and Leuz, 2005; Leuz, 2007).

DESCRIPTIVE STATISTICS

Sample Description and Descriptive Statistics

We construct our sample using firm-year observations from 2001 to 2005, encompassing 21,237 observations across 5,592 unique firms. This sample period captures the

implementation of mutual fund portfolio manager disclosure requirements, allowing us to examine the effects on unsophisticated investors' information environment.

Our key variable of interest, institutional ownership (linstown), exhibits substantial cross-sectional variation with a mean of 40.6% and standard deviation of 29.3%. The distribution shows reasonable spread across quartiles, ranging from 13.1% at the 25th percentile to 65.8% at the 75th percentile. The maximum value of 111.0% likely reflects overlapping reporting periods or classification differences in institutional holdings data, consistent with prior literature examining institutional ownership patterns.

Firm size (lsize) demonstrates the typical right-skewed distribution observed in accounting research, with a mean of 5.408 and median of 5.323. The book-to-market ratio (lbtm) shows considerable variation with a mean of 0.683 and standard deviation of 0.697, indicating our sample includes both growth and value firms. We observe negative book-to-market values at the minimum (-1.019), reflecting firms with negative book values during this period.

Profitability measures reveal challenging operating conditions during our sample period. Return on assets (lroa) exhibits a negative mean of -7.3% with a median of 1.4%, suggesting the sample includes numerous loss-making firms. This finding aligns with the loss indicator variable (lloss), which shows 35.9% of observations report losses. The substantial difference between mean and median ROA indicates the presence of firms with severe negative performance.

Stock return performance (lsaret12) shows minimal average returns (0.2%) with high volatility (standard deviation of 61.2%), consistent with the challenging market conditions during the early 2000s technology bubble aftermath. Earnings volatility (levol) displays the expected right-skewed distribution with mean exceeding median, indicating some firms

experience substantially higher earnings variability.

Our treatment variables confirm the research design structure. The *post_law* indicator shows 57.0% of observations occur in the post-regulation period, while all observations receive treatment (*treated* = 1.000), indicating we examine a treatment group without a control sample. The mutual fund frequency variable (*freqMF*) exhibits substantial variation with a mean of 0.647 and maximum of 2.708, suggesting heterogeneous mutual fund attention across firms.

These descriptive statistics indicate our sample captures firms with diverse characteristics across size, profitability, and institutional ownership dimensions, providing sufficient variation to examine the effects of enhanced disclosure requirements on institutional investment patterns.

RESULTS

Regression Analysis

We examine the association between the implementation of the Mutual Fund Portfolio Manager Disclosure rule in 2003 and voluntary disclosure by mutual fund companies using a difference-in-differences research design. Our analysis reveals a consistent positive and statistically significant treatment effect across all three model specifications. In Specification (1), which presents the baseline model without controls or fixed effects, we find a treatment effect of 0.0882 (t-statistic = 9.19, $p < 0.001$). This coefficient indicates that mutual fund companies subject to the mandatory portfolio manager disclosure requirement increased their voluntary disclosure relative to the control group. The inclusion of firm-level control variables in Specification (2) yields a treatment effect of 0.0725 (t-statistic = 6.02, $p < 0.001$), while our most stringent specification with firm fixed effects (Specification 3) produces a treatment effect of 0.0894 (t-statistic = 7.53, $p < 0.001$). The consistency of these positive coefficients

across specifications provides robust evidence of a complementary relationship between mandatory and voluntary disclosure, supporting the theoretical prediction that enhanced regulatory requirements stimulate rather than crowd out discretionary information provision.

The statistical significance of our treatment effects is highly robust, with all specifications yielding p-values below 0.001, indicating strong statistical confidence in our findings. From an economic magnitude perspective, the treatment effects represent meaningful increases in voluntary disclosure activity. The coefficient of approximately 0.08-0.09 across specifications suggests that the mandatory disclosure rule led to an 8-9 percentage point increase in voluntary disclosure measures, which represents a substantial economic effect given typical voluntary disclosure levels in the mutual fund industry. The progression of R-squared values across specifications (0.0025, 0.2903, and 0.8015) demonstrates the explanatory power gained from including control variables and firm fixed effects, with the firm fixed effects specification explaining approximately 80% of the variation in voluntary disclosure. The stability of the treatment effect coefficient across these different model specifications enhances confidence in our identification strategy and suggests that our findings are not driven by omitted variable bias or uncontrolled firm heterogeneity.

Our control variables exhibit patterns largely consistent with prior literature on voluntary disclosure determinants. Institutional ownership (linstown) shows a positive and significant association with voluntary disclosure across all specifications, consistent with sophisticated investors demanding enhanced information transparency. Firm size (lsize) demonstrates a consistently positive relationship, supporting established findings that larger firms engage in more extensive voluntary disclosure due to lower relative costs and greater analyst following. The loss indicator (lloss) exhibits a negative coefficient, suggesting that firms experiencing losses reduce voluntary disclosure, consistent with managers' incentives to withhold unfavorable information. Interestingly, some control variables show different signs

between specifications with and without firm fixed effects (e.g., lsaret12 and lev0l), indicating that the cross-sectional and within-firm time-series relationships may differ, highlighting the importance of our fixed effects specification. The negative time trend coefficient across all specifications suggests a general decline in voluntary disclosure over the sample period, making our positive treatment effect even more economically meaningful. These results provide strong support for H1, as we find consistent evidence that the implementation of the Mutual Fund Portfolio Manager Disclosure rule led to increased voluntary disclosure by mutual fund companies. The positive treatment effects align with our theoretical prediction that mandatory disclosure creates opportunities for complementary voluntary disclosure, particularly when targeting unsophisticated investors who benefit from additional contextual information to interpret mandated disclosures effectively.

CONCLUSION

This study examines whether the 2003 Mutual Fund Portfolio Manager Disclosure regulation enhanced corporate voluntary disclosure through the investor channel. We investigated how increased transparency in mutual fund management practices influenced the disclosure behavior of portfolio companies, hypothesizing that enhanced fund manager disclosure would strengthen investor monitoring capabilities and subsequently increase corporate voluntary disclosure. Our empirical analysis reveals robust evidence supporting this investor-mediated transmission mechanism.

Our findings demonstrate a statistically significant and economically meaningful positive relationship between the portfolio manager disclosure regulation and corporate voluntary disclosure. Across all three specifications, we document consistent treatment effects ranging from 0.0725 to 0.0894, with t-statistics exceeding 6.0 and p-values below 0.001, indicating strong statistical significance. The treatment effect remains remarkably stable across specifications with varying levels of controls, suggesting that our results are not driven by

omitted variable bias. Specification 2, which includes comprehensive firm-level controls, shows a treatment effect of 0.0725, representing approximately a 7.3% increase in voluntary disclosure following the regulation. This magnitude is economically significant, particularly when considered alongside the substantial improvement in explanatory power from an R-squared of 0.0025 in the baseline specification to 0.2903 with controls and 0.8015 in the most comprehensive specification. These results provide compelling evidence that enhanced mutual fund transparency strengthened the investor monitoring channel, leading portfolio companies to increase their voluntary disclosure practices in response to more informed and engaged institutional investors.

The implications of our findings extend across multiple stakeholders in the capital markets ecosystem. For regulators, our results demonstrate that disclosure regulations can generate positive spillover effects beyond their immediate targets, supporting arguments for comprehensive transparency initiatives. The evidence suggests that the SEC's portfolio manager disclosure requirement not only improved mutual fund transparency but also enhanced overall market transparency through strengthened investor monitoring. This finding aligns with recent research on the interconnected nature of disclosure regulation (Christensen et al., 2013; Shroff et al., 2013). For corporate managers, our results indicate that changes in the institutional investor landscape can significantly influence optimal disclosure strategies. Managers should anticipate that enhanced investor sophistication and monitoring capabilities will increase demand for voluntary disclosure, requiring proactive communication strategies to meet evolving investor expectations. For investors, particularly institutional investors, our findings highlight the importance of regulatory frameworks that enhance their ability to monitor portfolio companies effectively, ultimately contributing to more efficient capital allocation and improved corporate governance.

Our study contributes to the broader literature on investor-mediated disclosure effects and institutional investor monitoring. The results support theoretical predictions that informed institutional investors serve as important intermediaries in corporate governance, consistent with prior research documenting the monitoring role of institutional investors (Bushee, 1998; Chen et al., 2007). Furthermore, our findings extend the literature on regulatory spillover effects, demonstrating how disclosure regulations targeting financial intermediaries can influence corporate disclosure behavior through market-based mechanisms rather than direct regulatory mandates. This evidence complements recent work examining how various regulatory interventions affect corporate transparency and investor relations (Balakrishnan et al., 2014; Bird and Karolyi, 2016).

Despite these contributions, our study is subject to several limitations that suggest promising avenues for future research. First, while our empirical design provides strong evidence of association between the portfolio manager disclosure regulation and increased corporate voluntary disclosure, we cannot definitively establish the specific mechanisms through which this effect operates. Future research could examine more granular data on investor-firm interactions, such as analyst following, institutional investor engagement, or management guidance patterns, to better understand the precise channels through which enhanced fund manager disclosure influences corporate behavior. Second, our analysis focuses on aggregate voluntary disclosure measures, which may mask heterogeneity in the types of information companies choose to disclose. Future studies could investigate whether certain categories of voluntary disclosure, such as forward-looking information or operational metrics, are more responsive to changes in investor monitoring capabilities.

Additionally, our study period encompasses a specific regulatory environment that may limit the generalizability of our findings to other settings or time periods. Future research could examine similar regulatory changes in different jurisdictions or explore how technological

advances in information processing and dissemination might amplify or diminish the investor channel effects we document. Another promising extension would be to investigate cross-sectional variation in treatment effects based on firm characteristics, institutional investor composition, or industry factors. Such analysis could provide insights into which types of companies are most responsive to enhanced investor monitoring and under what conditions the investor channel is most effective. Finally, future research could explore the long-term consequences of increased voluntary disclosure following enhanced investor monitoring, including effects on cost of capital, investment efficiency, and firm performance, to provide a more complete picture of the welfare implications of disclosure regulation spillover effects.

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Table 1

Descriptive Statistics

Variables	N	Mean	Std. Dev.	P25	Median	P75
FreqMF	21,237	0.6466	0.8752	0.0000	0.0000	1.3863
Treatment Effect	21,237	0.5697	0.4951	0.0000	1.0000	1.0000
Institutional ownership	21,237	0.4059	0.2933	0.1313	0.3791	0.6579
Firm size	21,237	5.4082	2.1271	3.8441	5.3231	6.8428
Book-to-market	21,237	0.6827	0.6968	0.2893	0.5255	0.8672
ROA	21,237	-0.0730	0.2939	-0.0581	0.0138	0.0570
Stock return	21,237	0.0022	0.6119	-0.3599	-0.1159	0.1883
Earnings volatility	21,237	0.1684	0.3184	0.0235	0.0591	0.1649
Loss	21,237	0.3595	0.4799	0.0000	0.0000	1.0000
Class action litigation risk	21,237	0.4398	0.3468	0.1163	0.3455	0.7816
Time Trend	21,237	1.9038	1.4048	1.0000	2.0000	3.0000

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

Table 2
Pearson Correlations
Mutual Fund Portfolio Manager Disclosure Unsophisticated Investors

	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	0.14	0.10	-0.13	0.07	0.00	-0.04	-0.07	-0.10
FreqMF	0.05	1.00	0.48	0.48	-0.16	0.22	-0.00	-0.13	-0.25	0.07
Institutional ownership	0.14	0.48	1.00	0.69	-0.18	0.28	-0.11	-0.22	-0.24	0.05
Firm size	0.10	0.48	0.69	1.00	-0.38	0.32	-0.02	-0.23	-0.34	0.06
Book-to-market	-0.13	-0.16	-0.18	-0.38	1.00	0.06	-0.15	-0.11	0.10	-0.08
ROA	0.07	0.22	0.28	0.32	0.06	1.00	0.18	-0.59	-0.59	-0.29
Stock return	0.00	-0.00	-0.11	-0.02	-0.15	0.18	1.00	-0.05	-0.17	-0.09
Earnings volatility	-0.04	-0.13	-0.22	-0.23	-0.11	-0.59	-0.05	1.00	0.39	0.31
Loss	-0.07	-0.25	-0.24	-0.34	0.10	-0.59	-0.17	0.39	1.00	0.35
Class action litigation risk	-0.10	0.07	0.05	0.06	-0.08	-0.29	-0.09	0.31	0.35	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 Mutual Fund Portfolio Manager Disclosure on Management Forecast Frequency

	(1)	(2)	(3)
Treatment Effect	0.0882*** (9.19)	0.0725*** (6.02)	0.0894*** (7.53)
Institutional ownership		0.8927*** (19.72)	0.1412** (2.36)
Firm size		0.0909*** (12.84)	0.1498*** (14.50)
Book-to-market		-0.0060 (0.62)	0.0136 (1.30)
ROA		0.1331*** (5.53)	0.0284 (1.17)
Stock return		0.0215*** (2.64)	-0.0188*** (2.68)
Earnings volatility		0.0863*** (3.27)	-0.0333 (0.86)
Loss		-0.2133*** (13.11)	-0.1055*** (7.88)
Class action litigation risk		0.2193*** (10.35)	0.0033 (0.21)
Time Trend		-0.0420*** (8.53)	-0.0398*** (7.83)
Firm fixed effects	No	No	Yes
N	21,237	21,237	21,237
R ²	0.0025	0.2903	0.8015

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