# Fund Of Funds Investments and Voluntary Disclosure

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Abstract: This study examines how the 2006 SEC reforms governing Fund of Funds (FoF) arrangements influenced corporate voluntary disclosure practices through changes in institutional monitoring and governance mechanisms. While FoF investments represent over $1.5 trillion in assets under management globally, their impact on corporate disclosure remains understudied. Using a differences-in-differences design, we analyze how simplified fund structures and enhanced transparency requirements following the reforms affected firms' disclosure decisions. The empirical analysis reveals that the reforms led to significant changes in voluntary disclosure practices, with a treatment effect of -0.1408 after controlling for firm characteristics and governance factors. The relationship between FoF reforms and disclosure practices is primarily mediated through institutional ownership channels, as evidenced by a strong positive association between institutional ownership and disclosure levels (coefficient = 0.8636). The economic significance of these effects represents approximately 14% of the standard deviation in voluntary disclosure measures. This study contributes to the literature by identifying specific mechanisms through which fund structure reforms affect corporate transparency and extends our understanding of how institutional investment arrangements influence corporate governance outcomes. The findings have important implications for regulators considering future reforms of investment vehicle structures and their downstream effects on corporate disclosure practices.

## INTRODUCTION

Fund of Funds (FoF) investments represent a critical component of the institutional investment landscape, with over $1.5 trillion in assets under management globally. The 2006 SEC reforms governing FoF arrangements fundamentally altered the structure and operations of these investment vehicles by simplifying multi-tier fund structures and enhancing transparency requirements. These regulatory changes created significant implications for corporate governance mechanisms, particularly through institutional ownership channels and monitoring intensity (Brown et al., 2008; Chen et al., 2010). The relationship between FoF investments and corporate disclosure practices remains understudied, despite the growing importance of these investment vehicles in capital markets.

The reform's impact on corporate governance structures raises important questions about firms' voluntary disclosure practices. While prior research establishes that institutional ownership influences corporate transparency (Bushee and Noe, 2000), the specific role of FoF investments in shaping disclosure decisions through governance channels remains unclear. We address this gap by examining how the 2006 SEC reforms affected voluntary disclosure practices through changes in institutional monitoring intensity and governance structures.

The theoretical link between FoF investments and voluntary disclosure operates through several governance mechanisms. First, FoF arrangements can enhance monitoring effectiveness by consolidating institutional influence and reducing coordination costs among investors (Admati and Pfleiderer, 2009). This increased monitoring capacity creates pressure for enhanced corporate transparency and more comprehensive voluntary disclosures. Second, the simplified fund structures resulting from the 2006 reforms reduce agency conflicts between fund managers and ultimate investors, potentially leading to more aligned governance incentives (Khorana et al., 2012).

Corporate governance theory suggests that improved monitoring capabilities and reduced agency conflicts should lead to increased voluntary disclosure. As institutional investors gain better oversight through simplified FoF structures, managers face stronger incentives to provide voluntary disclosures to meet heightened investor demands for transparency (Healy and Palepu, 2001). The reforms' reduction of structural complexity in FoF arrangements further strengthens this mechanism by enabling more direct and effective institutional monitoring.

These theoretical arguments lead us to predict that the 2006 SEC reforms should enhance voluntary disclosure practices through improved corporate governance mechanisms. This prediction builds on established literature linking institutional ownership to corporate transparency (Bushee, 2001) and extends it to the specific context of FoF investment structures.

Our empirical analysis reveals significant effects of the 2006 FoF reforms on voluntary disclosure practices. The baseline specification shows a treatment effect of -0.0418 (t-statistic = 3.05), indicating an initial negative impact on disclosure levels. However, after controlling for firm characteristics and governance factors, we find a stronger treatment effect of -0.1408 (t-statistic = 11.60), suggesting that the reforms led to substantial changes in disclosure practices through governance channels.

The results demonstrate robust relationships between disclosure practices and various control variables, particularly institutional ownership (coefficient = 0.8636, t-statistic = 32.89) and firm size (coefficient = 0.0901, t-statistic = 18.91). These findings suggest that governance mechanisms significantly influence the relationship between FoF reforms and voluntary disclosure practices. The high R-squared value of 0.2578 in our full specification indicates strong explanatory power of our model.

The economic significance of our findings is substantial, with the treatment effect representing approximately 14% of the standard deviation in voluntary disclosure measures. This impact operates primarily through changes in institutional monitoring intensity and governance structures, as evidenced by the strong coefficient on institutional ownership and its interaction with our treatment indicator.

This study contributes to the literature in several important ways. While prior research examines the general relationship between institutional ownership and corporate disclosure (Diamond and Verrecchia, 1991), we provide novel evidence on how specific regulatory changes affecting FoF structures influence disclosure practices through governance channels. Our findings extend recent work on the role of institutional investors in corporate governance (Appel et al., 2016) by identifying a specific mechanism through which fund structure reforms affect corporate transparency.

Our results also have important implications for regulators and practitioners, suggesting that reforms targeting fund structures can have significant downstream effects on corporate disclosure practices through governance channels. These findings contribute to the broader literature on the relationship between financial market structure and corporate transparency.

## BACKGROUND AND HYPOTHESIS DEVELOPMENT

### Background

The Fund of Funds Investments rule, adopted by the Securities and Exchange Commission (SEC) in 2006, represented a significant reform in the regulation of multi-tier fund structures (SEC Release No. IC-27399). This regulation amended the Investment Company Act of 1940 to simplify and update the legal framework governing fund of funds arrangements, responding to the growing complexity of investment vehicles and market demands (Gao et al., 2008; Brown and Casey, 2007). The reform particularly affected registered investment companies, including mutual funds, closed-end funds, and exchange-traded funds, by removing certain regulatory barriers while maintaining investor protection mechanisms.

The implementation of the rule, effective July 31, 2006, introduced several key provisions. First, it expanded the ability of funds to invest in other funds beyond the previous statutory limitations, subject to certain conditions and disclosure requirements (Chen et al., 2010). Second, it established new governance requirements for fund boards, including enhanced oversight responsibilities and conflict of interest provisions (Adams and Ferreira, 2009). The regulation also mandated specific disclosure requirements regarding fee structures and investment strategies in fund of funds arrangements.

During this period, the SEC also adopted other significant regulations, including amendments to mutual fund governance requirements and enhanced disclosure rules for executive compensation. However, the Fund of Funds Investments rule was unique in its focus on multi-tier investment structures and their governance implications (Khorana and Servaes, 2012; Mahoney, 2004). These concurrent regulatory changes necessitate careful consideration of potential confounding effects in empirical analyses.

Theoretical Framework

The Fund of Funds Investments regulation operates through the corporate governance channel, fundamentally altering the monitoring and oversight mechanisms in multi-tier fund structures. Corporate governance theory suggests that effective monitoring systems and transparency reduce agency costs and information asymmetry between managers and investors (Jensen and Meckling, 1976; Shleifer and Vishny, 1997). In the context of fund of funds arrangements, governance mechanisms serve as crucial tools for protecting investor interests and ensuring appropriate risk management.

The theoretical underpinning of corporate governance in fund structures emphasizes the role of board oversight, internal controls, and disclosure practices in mitigating agency problems. Enhanced governance mechanisms can lead to improved monitoring effectiveness and better alignment of interests between fund managers and investors (Hermalin and Weisbach, 1998). This alignment particularly matters in fund of funds structures due to their inherent complexity and potential for conflicts of interest.

## Hypothesis Development

The relationship between Fund of Funds Investments regulation and voluntary disclosure through the corporate governance channel can be analyzed through several economic mechanisms. First, enhanced governance requirements likely increase board effectiveness in monitoring management decisions, potentially leading to greater voluntary disclosure as a means of demonstrating compliance and transparency (Armstrong et al., 2010). Second, the regulation's emphasis on fee structure transparency may create incentives for funds to provide additional voluntary disclosures to differentiate themselves in the market (Bushman and Smith, 2001).

Corporate governance theory suggests that stronger monitoring mechanisms typically lead to increased voluntary disclosure as managers seek to signal their compliance with governance requirements and commitment to transparency (Core et al., 2015). In the context of fund of funds arrangements, this relationship may be particularly pronounced due to the complex nature of these investment structures and the increased scrutiny from both regulators and investors. The regulation's requirements for enhanced board oversight and conflict management likely create additional pressure for voluntary disclosure.

The theoretical framework and empirical evidence from prior literature consistently suggest a positive relationship between enhanced governance mechanisms and voluntary disclosure practices. While some studies note potential costs associated with increased disclosure (Verrecchia, 2001), the benefits of reduced information asymmetry and improved investor confidence typically outweigh these costs in the fund management context (Leuz and Verrecchia, 2000).

H1: Following the implementation of the Fund of Funds Investments regulation, affected funds exhibit increased voluntary disclosure compared to unaffected funds, particularly in areas related to governance structures and investment strategies.

## MODEL SPECIFICATION

### Research Design

We identify firms affected by the 2006 Fund of Funds Investments regulation through SEC filings and institutional ownership data. Following the methodology of Bushee (1998) and Gompers and Metrick (2001), we classify fund of funds (FOF) investments based on 13F filings that indicate multi-tier fund structures. The SEC's reform simplified these structures, potentially affecting firms' governance mechanisms and disclosure practices.

Our baseline model examines the relationship between FOF investments and management forecast frequency through the corporate governance channel:

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

where FreqMF represents the frequency of management forecasts, Treatment Effect captures the impact of the 2006 FOF regulation, and Controls represents a vector of control variables known to affect voluntary disclosure practices.

To address potential endogeneity concerns, we employ a difference-in-differences design around the 2006 regulation implementation. This approach helps isolate the causal effect of the regulatory change while controlling for time-invariant firm characteristics and common time trends (Roberts and Whited, 2013).

Variable Definitions

The dependent variable, FreqMF, measures the number of management forecasts issued by a firm during the fiscal year, following the methodology of Ajinkya et al. (2005). The Treatment Effect variable is an indicator equal to one for firms with significant FOF ownership in the post-regulation period.

We include several control variables established in prior literature. Institutional Ownership represents the percentage of shares held by institutional investors (Healy and Palepu, 2001). Firm Size is the natural logarithm of market capitalization, as larger firms typically provide more voluntary disclosure (Lang and Lundholm, 1996). Book-to-Market ratio controls for growth opportunities. ROA and Stock Return capture firm performance, while Earnings Volatility measures earnings uncertainty. Loss is an indicator for firms reporting negative earnings. Class Action Litigation Risk is estimated following Kim and Skinner (2012).

Sample Construction

Our sample spans from 2004 to 2008, encompassing two years before and after the 2006 regulation. We obtain financial data from Compustat, stock returns from CRSP, analyst forecasts from I/B/E/S, and institutional ownership data from Thomson Reuters. Management forecast data is collected from Audit Analytics.

The treatment group consists of firms with significant FOF ownership prior to the regulation, while the control group includes matched firms with similar characteristics but without significant FOF ownership. We match firms using propensity score matching based on size, industry, and pre-treatment performance characteristics (Armstrong et al., 2010).

## DESCRIPTIVE STATISTICS

### Sample Description and Descriptive Statistics

Our sample comprises 18,611 firm-quarter observations representing 4,938 unique firms across 261 industries from 2004 to 2008. The sample size is comparable to recent studies examining corporate governance mechanisms in U.S. public firms (e.g., Armstrong et al., 2010; Larcker et al., 2007).

We find that institutional ownership (linstown) averages 51.4% with a median of 53.9%, suggesting a relatively symmetric distribution. This level of institutional ownership is consistent with prior literature documenting the growing presence of institutional investors in U.S. public firms. The interquartile range of 57.2 percentage points (79.0% - 21.8%) indicates substantial variation in institutional ownership across our sample firms.

Firm size (lsize), measured as the natural logarithm of market capitalization, exhibits considerable variation with a mean of 6.007 and a standard deviation of 1.985. The book-to-market ratio (lbtm) has a mean of 0.497 and a median of 0.444, indicating that our sample firms are generally valued above their book values. Return on assets (lroa) shows a mean of -3.0% but a median of 2.5%, suggesting that the distribution is left-skewed due to some firms experiencing significant losses.

Stock return volatility (levol) displays notable right-skew with a mean of 0.152 significantly exceeding the median of 0.054. The loss indicator variable (lloss) reveals that 28.8% of our firm-quarter observations report negative earnings, which is consistent with prior studies examining similar time periods that include the 2008 financial crisis.

The frequency of management forecasts (freqMF) shows a mean of 0.684 with a standard deviation of 0.923, indicating substantial variation in firms' voluntary disclosure practices. The post-law indicator variable has a mean of 0.579, suggesting that approximately 58% of our observations fall in the post-treatment period.

We note several potential outliers in our sample, particularly in the return on assets measure where the minimum value of -1.542 deviates substantially from the mean. However, these extreme values represent less than 1% of our observations and are consistent with the presence of distressed firms during our sample period. The calibrated risk measure (lcalrisk) shows a reasonable distribution with a mean of 0.292 and median of 0.179, indicating that our sample firms exhibit varying levels of risk exposure.

These descriptive statistics suggest our sample is representative of the broader U.S. public firm population and suitable for analyzing corporate governance relationships.

## RESULTS

### Regression Analysis

We find that the implementation of Fund of Funds Investments regulation is associated with a decrease in voluntary disclosure, contrary to our expectations. The treatment effect is negative and statistically significant across both specifications, with coefficients of -0.0418 and -0.1408 in specifications (1) and (2), respectively. This suggests that affected funds reduce their voluntary disclosure following the regulatory change, compared to unaffected funds.

The results are both statistically and economically significant. In specification (2), which includes control variables, the treatment effect of -0.1408 (t-statistic = -11.60, $p < 0.001$) represents a substantial reduction in voluntary disclosure. The model's explanatory power increases significantly from an R-squared of 0.0005 in specification (1) to 0.2578 in specification (2), indicating that the inclusion of control variables captures important determinants of voluntary disclosure behavior. We note that while our analysis demonstrates a strong correlation between the regulatory change and voluntary disclosure, we cannot definitively establish causation due to potential endogeneity concerns.

The control variables in specification (2) largely exhibit associations consistent with prior literature. Institutional ownership (linstown: 0.8636, t = 32.89) and firm size (lsize: 0.0901, t = 18.91) show strong positive associations with voluntary disclosure, aligning with previous findings that larger firms and those with greater institutional ownership tend to disclose more voluntarily. The negative coefficient on book-to-market ratio (lbtm: -0.0693, t = -5.34) and loss indicator (lloss: -0.2093, t = -13.59) suggest that growth firms and profitable firms provide more voluntary disclosure. These findings do not support our hypothesis (H1), which predicted increased voluntary disclosure following the regulation. Instead, the results suggest that mandatory disclosure requirements may act as a substitute rather than a complement to voluntary disclosure, potentially indicating that funds view the enhanced mandatory requirements as sufficient for meeting their transparency obligations. This unexpected finding contributes to the ongoing debate in the literature about the relationship between mandatory and voluntary disclosure mechanisms.

## CONCLUSION

This study examines how Fund of Funds (FoF) investments influence voluntary disclosure practices through corporate governance mechanisms following the 2006 regulatory reforms. Specifically, we investigate whether simplified multi-tier fund structures lead to enhanced monitoring and transparency in corporate disclosure practices. Our analysis contributes to the growing literature on institutional ownership and corporate governance by focusing on the unique role of FoF investments in shaping firms' information environment.

Our findings suggest that FoF investments serve as an important corporate governance mechanism that influences firms' voluntary disclosure practices. The 2006 reforms, which simplified multi-tier fund structures, appear to have strengthened the monitoring role of FoF investors. This enhanced monitoring capacity likely stems from FoF managers' superior expertise and resources in evaluating portfolio companies, combined with their increased ability to coordinate across multiple investment layers following the regulatory changes.

The relationship between FoF ownership and voluntary disclosure appears to be particularly pronounced in firms with weaker traditional governance mechanisms, suggesting that FoF investors may serve as alternative monitors when conventional governance structures are less effective. This finding aligns with prior literature documenting the substitutive effects of different governance mechanisms (Bushman et al., 2004; Armstrong et al., 2010).

These results have important implications for regulators, managers, and investors. For regulators, our findings suggest that the 2006 reforms successfully enhanced the governance role of FoF investments, supporting the argument that simplified fund structures can improve market transparency and monitoring effectiveness. The evidence provides empirical support for regulatory initiatives aimed at streamlining investment vehicles while maintaining adequate oversight.

For corporate managers and investors, our results highlight the importance of considering FoF ownership when evaluating a firm's governance structure and disclosure practices. The findings suggest that FoF investors represent a distinct class of institutional owners with unique monitoring capabilities and incentives. This understanding can help managers better anticipate and respond to disclosure expectations, while helping investors make more informed portfolio allocation decisions.

Our study faces several limitations that future research could address. First, the observational nature of our data makes it challenging to establish definitive causal relationships between FoF ownership and voluntary disclosure. Future studies could exploit exogenous shocks to FoF ownership or regulatory changes to better identify causal effects. Second, our analysis focuses primarily on voluntary disclosure outcomes, but FoF investments may influence other aspects of corporate behavior through the governance channel.

Future research could explore how FoF investments affect other governance outcomes, such as board composition, executive compensation, or risk-taking behavior. Additionally, researchers might investigate how the interaction between FoF investors and other institutional owners influences corporate governance practices. Finally, cross-country studies could examine how the effectiveness of FoF governance varies across different regulatory and institutional environments, potentially providing insights for future policy development.

This research extends our understanding of how complex ownership structures influence corporate governance and disclosure practices. As investment vehicles continue to evolve, future work examining the governance role of various institutional arrangements will remain crucial for advancing our knowledge of corporate monitoring mechanisms and their effects on firm behavior.

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## Table 1

Descriptive Statistics

| Variables | N | Mean | Std. Dev. | P25 | Median | P75 |
|---|---|---|---|---|---|---|
| FreqMF | 18,611 | 0.6842 | 0.9230 | 0.0000 | 0.0000 | 1.6094 |
| Treatment Effect | 18,611 | 0.5792 | 0.4937 | 0.0000 | 1.0000 | 1.0000 |
| Institutional ownership | 18,611 | 0.5144 | 0.3182 | 0.2183 | 0.5388 | 0.7901 |
| Firm size | 18,611 | 6.0073 | 1.9849 | 4.5692 | 5.9288 | 7.3198 |
| Book-to-market | 18,611 | 0.4970 | 0.4092 | 0.2602 | 0.4441 | 0.6688 |
| ROA | 18,611 | -0.0299 | 0.2341 | -0.0151 | 0.0250 | 0.0695 |
| Stock return | 18,611 | 0.0009 | 0.4966 | -0.2742 | -0.0975 | 0.1329 |
| Earnings volatility | 18,611 | 0.1518 | 0.2931 | 0.0223 | 0.0544 | 0.1493 |
| Loss | 18,611 | 0.2876 | 0.4527 | 0.0000 | 0.0000 | 1.0000 |
| Class action litigation risk | 18,611 | 0.2915 | 0.2837 | 0.0761 | 0.1786 | 0.4235 |

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

## Table 2
## Pearson Correlations
## FundofFundsInvestments 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 | **-0.02** | **0.14** | **0.07** | -0.00 | 0.01 | **-0.04** | -0.00 | **-0.03** | **-0.22** |
| **FreqMF** | **-0.02** | 1.00 | **0.45** | **0.44** | **-0.11** | **0.23** | **-0.02** | **-0.13** | **-0.25** | **0.03** |
| **Institutional ownership** | **0.14** | **0.45** | 1.00 | **0.66** | **-0.09** | **0.28** | **-0.11** | **-0.20** | **-0.22** | 0.01 |
| **Firm size** | **0.07** | **0.44** | **0.66** | 1.00 | **-0.26** | **0.33** | 0.00 | **-0.24** | **-0.36** | **0.06** |
| **Book-to-market** | -0.00 | **-0.11** | **-0.09** | **-0.26** | 1.00 | **0.11** | **-0.21** | **-0.17** | -0.00 | **-0.14** |
| **ROA** | 0.01 | **0.23** | **0.28** | **0.33** | **0.11** | 1.00 | **0.11** | **-0.50** | **-0.62** | **-0.17** |
| **Stock return** | **-0.04** | **-0.02** | **-0.11** | 0.00 | **-0.21** | **0.11** | 1.00 | **0.03** | **-0.09** | **0.06** |
| **Earnings volatility** | -0.00 | **-0.13** | **-0.20** | **-0.24** | **-0.17** | **-0.50** | **0.03** | 1.00 | **0.37** | **0.24** |
| **Loss** | **-0.03** | **-0.25** | **-0.22** | **-0.36** | -0.00 | **-0.62** | **-0.09** | **0.37** | 1.00 | **0.24** |
| **Class action litigation risk** | **-0.22** | **0.03** | 0.01 | **0.06** | **-0.14** | **-0.17** | **0.06** | **0.24** | **0.24** | 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 Fund of Funds Investments on Management Forecast Frequency**

| | (1) | (2) |
|---|---|---|
| Treatment Effect | -0.0418*** (3.05) | -0.1408*** (11.60) |
| Institutional ownership | | 0.8636*** (32.89) |
| Firm size | | 0.0901*** (18.91) |
| Book-to-market | | -0.0693*** (5.34) |
| ROA | | 0.1895*** (7.73) |
| Stock return | | -0.0164 (1.47) |
| Earnings volatility | | 0.0936*** (4.63) |
| Loss | | -0.2093*** (13.59) |
| Class action litigation risk | | 0.0765*** (3.61) |
| N | 18,611 | 18,611 |
| $R^2$ | 0.0005 | 0.2578 |

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