Why Do Institutions Delay Reporting Their Shareholdings? Evidence from Form 13F

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Abstract

Institutional investors are allowed to delay their disclosures of quarter-end holdings via form 13F for up to 45 days. This forbearance may help protect the institutions from potentially damaging behavior by other traders, in particular from free-riding copycatters and from front-runners. It also may help the institutions hide their voting power, and this has prompted public corporations to request a much shorter maximum reporting lag. We look at 14 years of 13F filings to gauge the role of these three motives in the decision to delay disclosure, and the results indicate that front-running and voting, but not copycatting, motivate delays.

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Institutions with at least $100 million in U.S.-listed equities must disclose what they held on calendar quarter-ends. They do not, however, have to disclose these holdings right away because the relevant rule, section 13(f) of the 1934 Securities Exchange Act, allows for a lag of up to 45 days. Corporations, as represented by the Association of Corporate Secretaries, say that shorter lags would be both feasible and desirable. On February 1, 2013, this association presented the Securities and Exchange Commission (SEC) with their argument for a lag of just two days, which they say would be feasible given modern technology, and desirable because it would prevent new shareholders from concealing their ownership at key moments, in particular when important issues might be put to vote.[1] In response, the Investment Company Institute (ICI) argues that longer lags protect institutions by defending them from copycats and front-runners.[2] Investment Adviser Association, IAA, expresses similar concerns as the ones outlined in the ICI's letter in its opposition to the proposed petition for shorter lags.[3] In this paper we evaluate the argument for reporting lags by analyzing the cross section and time series of the lags institutions choose. We focus on how these choices relate to the potential for copycatting and front-running, and also for the hiding of ownership around votes.

Copycatting and front-running are different in concept, though they can look similar in practice. Copycatting an institution is free-riding on its portfolio choice, trying to deliver something close to its return at a much lower cost (see, e.g., Frank, Poterba, Shackelford, and Shoven, 2004). So a copycatter aims to replicate the institution's recent trades. Front-running is trading in front of an expected trade by an institution, thereby making the same trade at a hopefully better price. Both copycatting and front-running can be enabled by portfolio disclosures. In the case of copycatting, this is simple: a trader can simply buy and hold whatever the institution discloses. In the case of front-running it is not as simple, since it depends on what a trader can infer from an institution's disclosures about what it

[1] https://www.sec.gov/rules/petitions/2013/petn4-659.pdf
[2] https://www.ici.org/pdf/27217.pdf
[3] http://www.sec.gov/comments/4-659/4659-15.pdf

will do next, and this inference could take many forms. For clarity, we focus on the form characterized by the ICI, where at quarter-end an institution is midway through executing a big trade. The concern is that a trader senses this fact from the change from the previous quarter-end, and thus makes a trade in the same direction, buying after an increase and selling after a decrease, hoping that this precedes the institution's remaining trades. So while the motives are different, both involve buying after disclosures show buys, and selling after they show sells.

An institution can thus combat both copycatting and front-running with a longer lag, and has the incentive to do so if such trading would be harmful. However, it may not be harmful: an institution would likely desire such trading if it in fact intends to trade in the opposite, rather than same, direction. An institution hoping to sell the million shares it recently bought would welcome any demand triggered by its disclosure of the purchase. This is useful for our purposes because it means that an institution's incentive to lag its quarter t disclosure increases with the correlation between its quarter t trades and its quarter $t+1$ trades. Therefore, we can test for the combined role of copycatting and front-running in reporting lags by testing whether the lag increases with this correlation.

To distinguish the separate roles of copycatting and front-running in disclosure delays, we analyze the effect of an institution's net cash flows on disclosure delays as a test of front-running. This is because copycatters are interested in trades that change portfolio weights, whereas front-runners are interested in any trades, and because net cash flows are less likely to affect these portfolio weights so more likely to be linked with front-running incentives. This is especially true if the fund indexes, since an index stabilizes the weights. Also, if the flow is out rather than in, funds generally have less latitude in what they can sell than in what they can buy which makes the resulting trade more predictable and easier to front-run.

Regarding the concern of the corporate secretaries, that shorter lags help uncover hidden voting power in time for the corporation to react to it, we can test whether institutions lag more when they have hidden voting power. An institution's votes reflect its ownership on

the vote's record date, and while we cannot see that exact quantity, we can see whether the institution's ownership increased from the quarter-end before the record date to the quarter-end after. So we use this increase to proxy for the hidden voting power, so that the lag in reporting the quarter-end-after holding measures how long the institution keeps these votes hidden. We focus on three groups of votes: mergers, shareholder proposals and management proposals.

For our empirical analysis we build a comprehensive database of the relevant filings and dates, and then using the cross section of filers and the lags they choose to gauge the significance of the various motives to delay. The starting point is the universe of 13F filings from 1999 through 2012 complied by Thomson Reuters. To these data we add the filing dates, as indicated by the Edgar database at the SEC website, and we also use the CIK identifier codes from the filings to add characteristics of the filers. Thus we have access to all 13f filings for 14 years, the lag at which each was filed, and filer-specific circumstances we can use to represent the cross section of incentives.

We first document that filing practices vary widely. The average lag is 37 days with a standard deviation of 10 days, and while five percent of filers report in less than two weeks, thirty percent wait the full 45 days or even longer. This wide range of disclosure practices supports the possibility of significant strategic behavior, and we first test for strategizing with respect to copycats and front-runners trading in the same direction the institution traded in quarter t. We test whether correlation between quarter t and quarter t+1 trading predicts longer lags, and we find no evidence of this for any type of institution.

Next we focus on front-running in particular by testing for the effect of quarter t flows. This effect is significant: both inflows and outflows strongly predicting delays in reporting, and consistent with the limited latitude to sell rather than buy, outflows predict more strongly than inflows. So the evidence indicates that institutions use the lag to make flow-driven trades before front-runners interfere. Looking more closely, we find that this use of reporting lags arises only amongst institutions that appear to be indexers or quasi-indexers and non-

hedge funds, consistent with their narrower range of trading opportunities.

To gauge the significance of votes to delays we first identify, across all institutions reporting 13F filings, all stocks with a merger record date in quarter t that are held or traded in quarter t by the institution. We find that institutions – specifically, the hedge funds and active managers – delay after increasing their holdings of a stock over its merger record date, so it appears that the institutions aim to hide the increase, which suggests more interest in swaying the vote than in pressuring management. The more passive institutions delay *less* if they maintain their positions across the record date.

A similar pattern emerges for shareholder proposals: hedge funds and active managers, but not more passive institutions delay reporting increases in holdings across record dates of shareholder proposals. And for management proposals, whether about compensation or other issues, hedge funds and active managers delay reporting their increased holdings much more than the more passive institutions do.

Thus, it appears that in general, strategic use of reporting lags delays the disclosure of voting-power increases to public corporations. A shorter maximum lag would shorten this delay, but at the expense of more exposure to the risk of front-running that also drives strategic use of reporting lags.

The remainder of the paper is divided into five sections. The first section reviews the appropriate literature and regulatory background. The second section outlines the hypotheses and the third section reviews the data. Section IV provides the empirical analysis and the last section concludes.

I. Literature and Regulatory Review

A. Regulation on ownership disclosure

Three laws in Section 13 of the Securities Exchange Act of 1934 guide the disclosure of ownership by institutions: Sections 13(d), 13(f), and 13(g). The focus of this study is on

the 13F form which provides a comprehensive filing of portfolio ownership of all securities registered with the Securities and Exchange Commission (SEC). Under Section 13(f), any registered investment advisor with discretion over client accounts with an aggregate fair market value of more than $100 million in assets must file a 13F form. This form reports the institutions' holdings of all SEC-registered securities as of the last trading day of the each quarter, or *Report Date*. Short positions and positions in options are not included in this filing. The form is filed on a later filing date, *File Date*, and the difference between the *File Date* and *Report Date* measures the reporting delay, *Delay*, which can be no longer than 45 days. If the *File Date* falls on a weekend or holiday, then the delay can be extended to the closest subsequent business day.[4]

An institution can apply to the SEC for confidential treatment using the CT Application which if granted would enable the institution to postpone reporting some or even all their holdings in the 13F report.[5] Rule 24b-2 of the Exchange Act outlines the circumstances under which a CT Application can be filed and also the information that is required to make the filing. The rationale for a CT Application is to protect 'public interest' which we believe in many instances implies protecting a managerial trading strategy and those investors benefiting from the strategy.[6] The CT Application requires institutional investment managers to detail the specific investment program that requires confidentiality and also to provide a timeline when holdings information is expected to be released. In the case that an institutional manager applies for confidentiality treatment, only those stocks involved in the trading strategy are withheld from public disclosure in the initial 13F filing. Once the trading strategy has been executed then the unreported holdings are included in a 13F "add-new-holdings" amendment filed after the original 13F. A recent study by Aragon, Hertzel, and Shi (2013) investigates those trades which are hidden from the public through the confidentiality treatment and find they are particularly informative with significant abnormal returns. The

[4]See Rule 0-3 under the 1934 Act, 17 C. F. R. 240.0-3 (1986).

[5]Securities and Exchange Commission, 1998, Section 13(f) Confidential Treatment Requests, June 17. https://www.sec.gov/divisions/investment/guidance/13fpt2.htm

[6]See Section 13(f)(4) and (5)

confidentiality treatment therefore is important for protecting profitable strategies.

If a 13F filing deadline is missed, instructions from the SEC to filers indicate to submit the disclosure document as soon as possible and most importantly, to ensure accuracy of the report.[7] An institution could be found guilty of violating the rules even if they claim not to be aware of them; however, explicit penalties on institutions who fail to report on time are only handed down if the lack of reporting is considered 'willful' and with intent.[8] There are very few instances in egregious cases where fines have been imposed on late filers: The most notable case was that of Quattro Global Capital which failed to file any 13F reports between 2002 and 2005 and was as a result fined $100,000.[9] In addition to the fine, the SEC under Section 203(e) of the Investment Advisors Act was able to censure Quattro as a registered investment advisor and restrict its activities.[10]

From our data, we observe there are 2% of 13F forms which are filed after 49 days and exceed the holiday and weekend grace period allowed under SEC guidelines. The length of the delay can be quite large and even in a few instances run into the next quarter. It therefore appears that filers have some flexibility to report after the 45 days as long as this delinquency does not persist. Brown and Schwarz (2013) find a similar dispersion and delinquency in reporting periods for a subsample of hedge funds. In 2010, the Office of Inspector General (OIG) released a detailed review of its procedures in enforcing the 13F reporting requirements and concluded that improvements were needed.[11]

Delays exceeding the prescribed regulatory time limit are not resulting from delays caused by confidentiality treatment since our data does not in general include CT applications. We only use information from the first filing of a 13F and not subsequent amendments. In less

[7] See Question 26 of http://www.sec.gov/divisions/investment/13ffaq.htm and also http://assets.tabbforum.com/13F%20White%20Paper%20Final.pdf for a discussion of penalties on late filers.

[8] See 15 U.S.C. § 78u-3.

[9] See White, Cory and Blake Brockway, "What the Institutional Investment Manager Needs to Know about SEC reporting under Section 13(f)", Working Paper, Hafalein White LLC. Also, see 15 U.S.C. § 78u-2 for the ability to impose penalties.

[10] Quattro Global Capital, LLC, File No. 3-12725; 15 U.S.C. § 80b-3(e).

[11] Office of Inspector General, Review of the SEC's Section 13(f) Reporting Requirement, Report No. 480 (Securities and Exchange Commission, September 27, 2010).

than 2% of our sample, we include data from 13F amendments and this arises in rare cases where we cannot identify an original 13F filing. One potential reason that an original 13F file is not available is because the entire filing was treated as confidential and is only revealed in an amendment file.

The 13(f) requirement is a general disclosure of holdings information meant to provide quarterly information to markets about long positions in registered equity holdings. The purpose of the requirement as set out in 1975 was to create a central database of investment activities of large institutions and to use the data to evaluate the activities and impact of institutional managers in capital markets. The long gap between the *File date* and *Report date* makes it difficult for any issuer to glean information about the make-up in their investor base. The 13D form is meant to fill this gap and is information that is more directly relevant for an issuer.

Under Section 13(d), any person or group of persons must disclose within 10 days if their beneficial ownership in any SEC-registered security exceeds 5%. Note that unlike the 13F filing, the 13D form applies to a wider range of investors, not simply those with investment discretion over a large asset base, and it also requires direct reporting to the SEC, the issuer, and the exchange rather than simple reporting to the SEC. The 13D disclosure requires the institution to reveal its beneficial ownership and associated voting rights and in addition requires the institution to provide an entire history of all its trades in the stock leading up to its 5% ownership stake (see Collin-Dufresne and Fos, 2015). The 13D form does not require any other information about the remaining portfolio holdings of the institution except the stock whose beneficial ownership exceeds 5%. After filing a 13D form, any amendments or changes in an institution's holdings would have to be updated and reported immediately. We believe the heavier reporting requirements of the 13D imply that most activist institutions are very careful not to trigger a 13D filing or if they do trigger this filing, it is with intent.

Several large index funds and 'passive' investors might trigger the 13D filing with no intention of taking ownership of the company or influencing change in the issuer. To minimize

their reporting requirements, these passive investors can instead file a 13G rather than a 13D. The 13(g) requirement for filing is less stringent. Passive investors acquiring more than 5% in a company are only required to file a 13G form 45-days after the calendar-year end when the institution has exceeded a 5% ownership stake in a registered security. In addition, amendments only need to be provided on an annual basis.

B. Recent regulatory debate

As noted in the introduction, there have been proposals put forward to reduce both the allowable delay of the 13F report as well as the 13D form. On February 1, 2013, senior representatives from NYSE Euronext, the Society of Corporate Secretaries and Governance Professionals, and the National Investor Relations Institute wrote a joint letter to the SEC asking that the delay in reporting a 13F form be reduced from 45 days to 2 days. Similarly a rulemaking petition was initiated by Wachtell, Lipton, Rosen, and Katz on March 7, 2011 arguing that the 10-day delay of the 13D form be reduced to 1 day and to introduce a "cooling-off period" that would prevent an institution from gathering more equity stake in a company after it passes the 5% ownership stake barrier.[12]

Institutions have countered the argument to reduce filing delays by raising concerns of copycat and front-runners who may try to anticipate trades that are revealed too soon after the quarter end. In addition, it is unclear whether early filing would provide sufficient time for the institution to sufficiently review the information to ensure it is accurate. This study hopes to provide some analysis that may help to first see whether 2 days is a feasible reporting deadline for institutions given current practices and then to see if there is any supportive evidence of the concerns and behaviors described in the regulatory debate.

[12] http://www.wlrk.com/docs/Letter%20to%20the%20SEC%20re_%2013%28d%29%20%28final%20version%29.pdf

C. *Literature*

This paper ties into the existing literature along numerous dimensions which investigate the use of the 13F form, the existence and impact of copycat trading, the prevalence of financial and accounting reporting delays, and the growth of investor activism. On the first topic, numerous papers have written on the holdings information revealed by institutions in 13D and13F forms and by mutual funds in the N-30, N-Q, N-CSR, and N-SAR files. Our focus is on 13F holdings but for both mutual funds and institutions, the research has looked at the information revealed in holdings information and using holdings to predict returns looking forward (Collin-Dufresne and Fos, 2015; Kacperczyk, Sialm, and Zheng, 2008). In general, these and other related papers reveal that institutions and professional managers are informed.

Given the portfolio holdings contain some information, a follow-up research question is whether a copycat trader could profit from trading on portfolio disclosures reporting with a lag. The research on the profitability of copycat strategies is lengthy with a wide range of conclusions. Phillips, Pukthuanthong, and Rau (2014) conclude that the public information in disclosures is not profitable while Frank et al. (2004) and Verbeek and Wang (2013) show that copycat funds could earn similar returns – after fees – as the funds they mimic implying a cost on the mimicked fund and a benefit to copycats. Shive and Yun (2013) and Chen, Hanson, Hong, and Stein (2008) argue flow induced trades are more easy to predict, particularly when there are large outflows, and hence flows are additional information that is beneficial for front-running strategies while Ge and Zheng (2006) report that more frequent disclosure negatively affects returns implying a cost to disclosure from front-runners. The paper most closely linked to ours is Brown and Schwarz (2013) who also look at 13F filings and copycat strategies. While others in the literature have focused on the negative aspects of disclosure, Brown and Schwarz (2013) make the novel observation that hedge funds can take advantage of copycat traders by trading into these trades near the disclosure date i.e. selling shares at the disclosure when they know that the copycats will buy. While our paper

looks at 13F filings and front-running strategies that might arise as a result of disclosure, our focus is on the decision to delay and not on the returns to either the copycat traders or the institutions being mimicked.

There is also an extensive literature exploring whether firms delay or strategically alter the timing of different accounting reports and information revealed to the market. The focus of this literature is on the firm decision to report financial information, annual reports, or earnings announcements. For instance, Botosan (1997) shows that greater voluntary disclosure provides more information to the market and lowers firm's cost of capital and therefore may encourage voluntary disclosure. Aragon and Nanda (2014) find evidence that managers try to strategically delay monthly performance disclosures when performance is weaker. Related to this, Jorion and Schwarz (2014) also find that when deciding to voluntarily list returns with a hedge fund database, they strategically list their best performers first and on multiple outlets to advertise good performance quickly. Similarly, Agarwal, Fos, and Jiang (2013) find hedge funds self-report better performance and tend to terminate self-reporting to databases when return performance sours. Overall it is clear that institutions are thoughtful about what information they convey to markets. In the case of 13F filings, much is dictated to institutions but still there is a decision about whether to report well before or near the reporting deadline. Our paper investigates whether institutions use this discretion and they do.

The final component of the literature that this paper touches on is investor activism. Many institutional investors, and in particular hedge funds, take an active role in voting with the intent of potentially trying to takeover the firm or influence decisions through the imposition of a new management structure. Brav, Jiang, Partnoy, and Thomas (2008) find that hedge fund activism propose strategic and operational remedies to firms which are successful 2/3 of the time. Similarly, Bebchuk, Brav, and Jiang (2014) find that activist hedge fund proposals and involvement do not have detrimental effects on the long-term outcomes for corporations. Becht, Franks, Grant, and Wagner (2015) find significant gains

from governance changes implemented as a result of activist policy. These papers counter the belief that hedge fund activism decreases firm value. A recent paper by Brav, Dasgupta, and Mathews (2014) shows that wolf-pack activists can effectively coordinate through a lead activist and as a coordinated group can increase their impact on altering governance at a targeted firm. The prevalence and effectiveness of activism ties closely to this paper because firms are worried that activists, working either as individuals or as a group, have incentives to hide their vote power. Strategically delaying their ownership is one way for activists to hide this information from corporations.

II. Hypothesis

In the tests in this paper, the dependent variable is the lag with which an institution reports a quarter-end portfolio. The explanatory variables are chosen to gauge the role of three motives to lag disclosure: to combat copycatting, to combat front-running, and to hide voting power. With regard to front-running, we limit the tests to the form of front-running proposed by the ICI, i.e. trading on the assumption that the institution is partway through changing a position, and therefore trading in the same direction as the change in the institution's portfolio from the end of the previous quarter.

While the traders' goals are different, copycatting and front-running (of this form) both involve trading in quarter t+1 in the same direction that the institution traded in quarter t. Thus, their potential harm to the institution is likely higher if the institution is also trading those stocks in that direction in t+1. Conversely, they are likely not harmful but instead beneficial if the institution is trading in the *other* direction in t+1. That is, an institution trying to make a trade has helped itself if it has encouraged outsiders to take the other side. So, to the extent that lagging encourages copycatting and front-running, the institution's incentive is to delay disclosure *if* its quarter t+1 trading is in the same direction as its quarter t trading, but *not* to delay if its quarter t+1 trading is in the other direction.

Therefore, to test for the strategic effect of both copycatting and front-running on lagging, we first calculate, for each institution in each quarter t, the correlation between the institution's quarter t trades, as indicated by the change of the institution's portfolio from the end of t-1 to the end of t, and the institution's quarter t+1 trades, as indicated by the change from the end of t to the end of t+1. Then, we use this correlation to test Hypothesis 1, which tests for the combined effect of copycatting and front-running:

H1: The lag of the quarter t *disclosure increases with the correlation between quarter* t *and quarter* t+1 *trading by the institution.*

To distinguish between the roles of copycatting and front-running, we focus on situations where front-running but not copycatting is relevant, and we do this by exploiting the difference between the goals of these strategies. The goal of copycatting an institution is mimicking its portfolio weights, whereas the goal of front-running is to make a trade before the institution does. So if copycatters and front-runners both infer that an institution will make a trade, copycatters will make that trade too *only if* it helps mimic the institution's portfolio weights, whereas front-runners will make that trade too *no matter what*. This is a useful distinction because it means we can distinguish between the roles of the two strategies by focusing on the trading arising from net cash flows, and by contrasting the trading by institutions that do and do not tend to index. Since an institution's decision to reallocate between stocks is more relevant to its portfolio weights than is its need to move money in or out of the market, trading arising from net cash flows is likely to inspire less copycatting. This is more so if the institution indexes more or is otherwise a passive investor, since indexing and passive investing stabilize portfolio weights as money flows in and out. Front-runners, on the other hand, benefit from trading ahead of the institution, regardless of why the institution is trading. Thus, we have Hypothesis 2, which tests specifically for front-running:

H2. Institutions that have undergone significant inflows or outflows in quarter t will lag their quarter t disclosures more, and this effect should be more pronounced for passive, index investors.

We can refine Hypothesis 2 more by appealing to an important asymmetry. Buying institutions have more latitude than selling institutions. This is because institutions buying to put positive cash flows to work have many stocks to choose from, but institutions selling to fund negative cash flows can sell only what they already own. This makes the trades of the latter institutions more predictable, and therefore, exposes these institutions relatively more to front-running. Thus, we have another hypothesis with which to test for the effect of front-running on reporting lags:

H3. Large outflows cause larger lags than do large inflows.

The last set of hypotheses address the concern of the corporate secretaries that activist investors hide the votes they will cast. We address this concern by first identifying the quarters in which corporations have voting record dates, and then estimating the news content of an institution's portfolio at the end of that quarter as simply the change from the end of the previous quarter. That is, if an institution held x shares at the end of t-1 and $x+y$ at the end of t, then the news content of the institution's eventual portfolio disclosure is y. If activist investors strategize to hide increases in voting power, then their lags should increase with y. So Hypothesis 4 is

H4: Activist institutions lag more after acquiring more shares across the record date of an important vote.

We address separately the major categories of corporate votes – merger votes, shareholder proposals and management proposals – and we employ several indicators for vote importance.

In contrast to the activist investors boosting voting power to pressure management, and disillusioned investors who 'vote with their feet' by leaving (Parrino, Sias, and Starks, 2003; Edmans, 2009) are the relatively more satisfied investors who stay put. To the extent these investors wish to communicate this satisfaction sooner rather than later to management and the rest of the market, they may prefer to lag relatively less, so we have our last hypothesis:

H5: Institutions maintaining their shareholdings across the record date lag relatively less.

III. Data

The 13F filings are publicly available through Electronic Data Gathering, Analysis, and Retrieval, (EDGAR) beginning the first quarter of 1999. SEC assigns each filing manager a unique Central Index Key, CIK, which can be used to identify different managers. Note that each CIK represents an institution rather than an individual portfolio of an institution. A mutual fund company may therefore have one CIK number and report all the holdings across many of its different funds in one report. Each 13F filing contains a header that includes the date at which the 13F holdings were filed, *File date*, along with the date the snapshot of holdings is captured, *Report date*. We extract these filing dates along with their corresponding CIKs from 13F filings from the first quarter of 1999 to the third quarter of 2012.

The contents of the 13F filings obtained from EDGAR do not follow a set format and therefore instances can arise where not all data can be read directly from these filings. To limit data error in reading the holdings information, we devise an algorithm to match CIK with the institutions identifier in Thomson-Reuters, MGRNO. The algorithm extracts as many holdings as possible directly from the SEC filings and then uses these holdings to match with holdings data on Thomson-Reuters Institutional Holdings (13F). A match between a CIK and MGRNO is declared if the correlation between the holdings data from EDGAR and Thomson-Reuters surpasses a certain threshold (40%). From this, we are able to determine the CIK for 116,902 (MGRNO, Quarters). We validate the matches by hand-matching a random selection to see if names also match and find that the algorithm is very accurate in matching. With this match, we directly rely on the 13F holdings information of Thomson-Reuters to reduce errors of reading this data from the 13F filings. The one important piece of information retained from the 13F form is the filing date.

We define $Delay_{i,t}$ as the number of days between the end of the calendar quarter t and filing date of the corresponding 13F file of institution i with the SEC. We also report summary statistics on a set of institutional characteristics constructed mainly based on the

quarterly holdings.[13] *Size* is the market value of equity holdings of the institution at the end of the calendar quarter measured in $Millions. *Average Holding* is the average number of quarters that the institution holds each equity in its portfolio with the holding period defined as the time between the current quarter and the quarter when the stock first appeared in an institution's portfolio. *Turnover* is the inter-quarter portfolio turnover rate calculated by dividing total transactions by *Size* and is reported as a decimal. *Normalized Herfindahl Index* is a measure of concentration of the institutions' portfolio measured as a fraction between 0 and 1. It is calculated by finding the Herfindahl Index of the institution's portfolio, H, in quarter t by summing the squared asset weights across all assets in the portfolio and then calculating *(H-1/N)/(1-1/N)*, where N is the number of stocks in the portfolio. *Fund Age* is the number of quarters since the institution's first appearance on Thomson Reuters. The variable *Above 5%* is constructed by dividing the number of holdings for which the institution owns more than 5% of the shares outstanding by the number of stocks in the institution's portfolio. It is expressed in decimal form. For instance if an institution held 50 different equities and in 10 of those instances the holding was more than 5% of the shares outstanding, the variable *Above 5%* would take the value 0.2. In contrast, *Near 5%* is defined as the number of holdings in the portfolio which are between 4% to 5% of the shares outstanding divided by the total number of holdings in the portfolio. *Flows* are calculated as the change in the *Size* of the institution over the quarter adjusting for returns and are expressed in decimals so a 5% inflow is reported as 0.05. *Returns* for the portfolio are calculated using a value weighted return of the stocks in the institution's portfolio over the quarter. The return data for each stock over the quarter is obtained from CRSP.

$$\text{Flows}_t = \frac{\text{Size}_t - \text{Size}_{t-1}(1 + \text{Return}_t)}{\text{Size}_{t-1}}$$

From *Flows*, we create two variables *Inflows* and *Outflows* which are defined as *Inflows* =

[13] To prevent extreme values of *Delay* from contaminating our results we winsorize *Delay* as well as other non-binar variables at the top and bottom 1%.

max(*Flows*, 0) and *Outflows*= $|min(Flows, 0)|$.

In our tests, we create several variables from our holdings information. In the case of testing the effect of copycat traders and front-runners on reporting delays, we calculate the correlation in trades between quarters. For each institution i and holding j, we calculate the *Percent Holding*$_{i,j,t}$ as the number of shares of the holding j as a percent of shares outstanding of the holding in quarter t. *Change Percent Holdings*$_{i,j,t}$ in quarter t is calculated as the change in *Percent Holdings*$_{i,j,t}$ between quarter *t-1* and quarter t. Finally, *Correlation Trades*$_{i,t}$ is the correlation between *Change Percent Holdings*$_{i,j,t}$ in quarter *t-1* and quarter t for institution i across all stocks To separately estimate the effects of positive and negative correlation on reporting delays, we create *Correlation Trades* $^{+}$ = max (*Correlation Trades*, 0) and *Correlation Trades* $^{-}$ =$|min(Correlation\ Trades, 0)|$.

Table I reports the summary statistics for the sample of matched and unmatched institutions of the Thomson-Reuter database. The majority of institutions are matched using our algorithm with only 12% of the Thomson-Reuter database unmatched. As can be seen from Table I the matched and unmatched institutions are comparable by most institutional characteristics such as size, turnover, and age. The sample of funds which are unmatched tend to be ones with highly concentrated portfolios with few different holdings where the inability to correctly read in one piece of holdings information for a filing will have a significant effect on the correlation between the two samples of holdings data. Quarterly inflows and outflows average 16% and 10% respectively and correspond in general to what we have observed in the institutional and asset management literatures. Note that in Table 1 only the non-zero values of *Inflows* and *Outflows* are included in the averages to gain a better understanding of the average overall absolute flows.

One of the notable descriptive statistics from Table I is the large variance in *Delay*. The average institution files their 13F forms approximately 37 days after the quarter end. However, the range of filing periods is significant with 5% of institutions reporting after 13 days while another 5% report after 47 days. Clearly there are a minority of institutions which

are capable of and willing to provide their filings soon after the quarter end. If regulators were to follow the proposed changes of requiring reporting 2-days after the quarter end, this would be a significant adjustment for almost all institutions. There are a significant number of institutions that file their mandatory disclosures after the 45-day deadline and about 5% after the grace period allowed if the maximum reporting delay falls on a weekend. As mentioned in the regulatory review, penalties can arise if an institution is late in providing their 13F report but these penalties seem to only be levied when an institution is repeatedly late in reporting, or is not reporting at all. There is some flexibility to delay reporting past the 45 days without being penalized as long as the institution is not doing this on a repeated basis.

There is also significant variation in reporting delay by the same institution over time with the average autocorrelation between the level of delay in quarter *t-1* and quarter t for all quarters and institution being 0.65. When we condition on the delay in quarter t being greater or equal to 41 days this correlation drops to 0.0288 compared to 0.56 if the delay is less than 41 days. It appears that those institutions reporting later tend to change their delay period more radically from one period to the next. If we measure autocorrelation for each individual institution and then take the average correlation across all institutions, this average is 0.1543 which again highlights that each institution is changing its delay decision significantly each quarter. Overall the wide dispersion in reporting delays is our first piece of evidence that institutions are strategically setting their reporting delay rather than simply choosing to disclose at the maximum 45-day delay period or on the same date each quarter.

For our analysis, we need to identify activist investors who may have an interest in hiding their holdings from investors or corporate management. To distinguish investor types, we obtain identifiers on investor types from Brian Bushee's website. The data identifies financial institutions as quasi indexers (QI) and non-quasi indexers (NQI). He also identifies financial institutions as bank trusts, insurance companies, investment companies, independent investment adviser, corporate (private) pension fund, public pension fund, university

and foundation endowments, and miscellaneous. As an alternative mechanism to distinguish activist investors, we also identify hedge funds in our sample by using the list of hedge funds from Griffin and Xu (2009). We augment this list of hedge funds with those mentioned on InsiderMonkey website by manually comparing the list of hedge funds to names of institutions in the Thompson-Reuter data. Table II provides a break-down of the sample by institutional type with almost 18% identified as hedge funds and 37% noted as non-quasi indexers. The proportion of these activist institutions seems to have increased as a percent of the total number of institutions after 2006.

To identify interesting proxy votes where institutions may have an interest in hiding their ownership for purposes of the vote, we obtain record date information about several different types of votes from Institutional Shareholder Services, ISS, including: merger votes, shareholder proposal, and management proposals on compensation. We also obtain the record date of each vote listed in ISS from the actual 14A filings available through EDGAR. Finally we obtain shares outstanding information from CRSP monthly stock files.

IV. Results

A. Descriptive evidence

The large standard deviation in filing dates provides some indication that there is a large discrepancy amongst institutions about when to file their 13F filings. To explore further whether this discrepancy is strategically driven, we look at how this delay varies in the cross-section and across time. In the policy debates, there is some indication that the delays on filings have worsened over time as activist investors are becoming more prevalent. We therefore try to empirically see whether there is any evidence that the average delay has changed over time by separating our sample into delays reported prior to and after 2006. Figure 1 presents a diagram of the cumulative distribution of 13F reports revealed throughout the quarter. The black line represents all quarters in the sample while the red and blue lines

represent all quarters before and after 2006. At the beginning of the quarter (Day 0), there are no institutions which have filed their 13F report. By day 45, we expect close to 100% of the institutions to have filed their 13F report and find that this lies somewhere between 80 and 85%. It is not until day 55 that we are observing close to 100% of the institutions reporting their 13F filings. Interestingly, when we split the sample into the period before and after 2006, it is clear that the latter sample of institutions is delaying their reporting longer. For example, by day 40, only 30% of institutions have reported their 13F filings in the post-2006 sample compared to 39% reporting their filings by the same day in the pre-2006. If delays in reporting were arising from technological restrictions, then one would expect delays to have shortened in the more recent period rather than lengthened and so certainly the evidence seems to counter this explanation of delays.

Proponents of a shortening in the reporting delay to 2 days argue that activist investors use the long reporting delay to hide changes in ownership prior to important corporate votes. Figures 2 to 4 separate the sample along different dimensions of activeness. First, Figure 2 shows the cumulative distribution of reports revealed over the quarter with blue and red representing non-hedge funds and hedge funds respectively. There is a significant distinction between the two subsamples of institutions with non-hedge funds reporting their 13F filings much earlier than hedge funds. For instance, by day 40, the portion of hedge funds and non-hedge funds which have reported their 13F filings are respectively 50% versus 25%. Figure 3 shows a similar split between quasi- and non-quasi indexers (as defined by Bushee and Noe, 2000; Bushee, 2001) denoted by the blue and red lines respectively. Again one observes that the institutions one would associate with more active investment strategies (non-quasi indexers) tend to delay their reporting. The gap in reporting delay is again large with approximately 55% of quasi indexers filing by day 40 in the quarter compared to only 30% of non-quasi indexers. Both Figure 2 and 3 find strong evidence that active institutions delay longer. The findings could arise either from a desire to hide ownership from corporations or to hide trades from other copycat or predatory traders to avoid front-running. Our subsequent

analysis tries to disentangle the reasons for these delays.

Figure 4 splits institutions by size with large and small institutions constituting those in top quintile and those in the bottom quintile respectively. There are several reasons why we might expect delays to differ by the size of the institution. First, a large institution is more likely in a position to alter voting outcomes so potentially take more of an interest in activist strategies. Second, large institutions potentially suffer more from front-running by predatory and copy-cat traders if the trades of a large institution are larger and suffer more from price pressures. The size of the firm is also a proxy for the complexity of the portfolio with larger firms holding on average more stocks so comparing delays of large and small institutions helps to measure if more complex portfolios require longer reporting periods.[14] Figure 4 confirms the intuition that larger institutions delay more than smaller, but the results are not that as significantly different as found in Figures 2 and 3. By day 40 in the quarter, 35% of large firms file their 13F reports compared to 45% of small firms.

Our last group of figures try to separate which subsample of institutions have increased their delay over time to explain the upward trend documented in Figure 1. Figures 5 through 7 present time-series representations of how delay has changed over time for different institutions. Figure 5 splits the sample into hedge funds (in red) and non-hedge funds (in blue) and each data point represents the average quarterly delay for the subsample. Amongst hedge funds we observe a strong upward trend in the delay period increasing from 39 to 42 days between 2000 and 2013. There is no visible upward trend in delay periods amongst non-hedge funds. Similarly in Figure 6, we observe that non-quasi indexers have increased their delay over this same time period with no visible increase in delay for quasi indexers. In comparing the time series of large and small firms in Figure 7, we observe a slight trend upwards for larger firms and much more volatility in the delay period for smaller firms.

Overall, Figures 5 to 7 suggest that there is a trend towards increased delay periods over time and this upward trend is driven mostly by active hedge funds and non-indexers. To

[14] In our sample, large institutions on average hold 762 different stocks in their portfolio whereas small institutions on average hold only about 65 stocks in their portfolios.

gain a better idea of how the distribution of delays is being affected over time, Figures 8 to 10 report the percent of institutions which delay their filings by 45 or more days. As before, these figures compare hedge funds to non-hedge funds (Figure 8), non-quasi indexers to quasi indexers (Figure 9), and large to small institutions (Figure 10). The diagrams are quite striking. We observe that between 2000 and 2013, the percent of hedge funds reporting on or after 45 days increased from about 20% to 60% while non-hedge funds hover around 30% over the same period. Similarly, the percent of non-quasi indexers reporting at these extreme reporting deadlines increased from 30% to 55%. Both small and large firms seem to have increased from about 20% to 40% over the same time period but there is no distinguishable difference between the two subgroups. The one important point to take away from these diagrams is that an increase in average reporting by a day or two can imply very large and economically meaningful increases to the probability that we observe extreme reporting delays.

B. Explaining reporting delays

Tables III and IV formalize those variables which help to explain both the average number of days it takes of an institution to file their 13F form (Table III) as well as the probability an institution reports on or after day 45 in the quarter (Table IV). Both tables allow us to evaluate whether the differences in delays reported in our earlier figures are statistically and economically significant. Table III presents a multivariate regression explaining the reporting delay in days from the end of the quarter. The variables used to explain this reporting delay include many of those already discussed in earlier figures as well as additional control variables. The model in Table III is detailed below.

$$
\begin{aligned}
Delay = \alpha &+ \beta_1 \text{Lag Delay} + \beta_2 Hedge\ Fund\ + \beta_3 NQI + \beta_4 Post\ 2006 \\
&+ \beta_5 HedgeFund \times Post\ 2006 + \beta_6 NQI \times Post\ 2006 \\
&+ \beta_7 \text{Normalized Herfindahl Index} + \beta_8 LogSize + \beta_9 LogTurnover + \beta_{10} Age \\
&+ \beta_{11} \text{Above 5\%} + \beta_{12} \text{Near 5\%} + \beta_{13} \text{Day-of-Week Dummies} \\
&+ \beta_{14} \text{Quarter Dummies} + \beta_{15} \text{Institutional Fixed Effect}
\end{aligned}
$$

The first five regressions in Table III shed light on cross-sectional characteristics which are important for explaining delay and we first summarize and interpret these results before considering the within-institutional variation in delay presented in Column 6 with the introduction of fixed institutional effects. As seen in our descriptive analysis, both hedge funds and non-quasi indexers report later than quasi indexers or other types of institutions. The estimation shows that the average reporting for these institutions is between 1 and 2 days later than other institutions. We also observe that the reporting delay has increased by almost half a day after 2006 and that actions by hedge funds and non-quasi indexers seem to be a large reason why this delay has increased after 2006 since both these institutions respectively show an increase in delay of about 0.80 and 0.71 of a day after 2006. Not surprisingly, if the mandated 45-day filing date after the quarter end falls on a Saturday or Sunday, we observe many institutions postponing their reporting presumably taking advantage of the ability to report on the following business day.

The remaining control variables enter significantly and as one would expect. Lagged delay enters with a coefficient ranging from 0.23 to 0.24 so institutions that were early or late reporters last period tend to do the same this period but the coefficient is significantly less than one so there appears to be significant time-series fluctuation from one quarter to the next across institutions. As suggested in the earlier descriptive statistics, larger institutions delay their holdings reports. Economically, the coefficient on *Log(Size)* suggests

that reporting delay will increase by approximately 3 days when comparing a median-size institution of $355 million to a larger institution in the top 5% of funds at $14,046 million.[15] We have three different measures to capture the activeness of the institution including a portfolio normalized herfindahl measure of concentration, a quarterly turnover measure, and a measure of the average holding period for the institution. Each of these measures indicates that more active institutions delay their holdings longer. In other words, institutions with more concentrated portfolios, higher turnover, and shorter holding periods tend to delay their reporting. The correlation between turnover and average holding periods is -0.36 so while the variables are related they do seem to be picking up different aspects of an institution's trading activity.

The last two control variables provide an alternative measure of activeness by looking at the percent of a portfolio with ownership either between 4-5% of the shares outstanding, *Near 5%*, or ownership in excess of 5% of the shares outstanding, *Above 5%*. These variables are interesting because of the additional reporting requirements that are required if an institution exceeds a 5% stake in a company. As described in the literature review, institutions are forced to file either a 13D or a 13G form no later than 10-days after their ownership in a company exceeds 5%. At that point, they have to provide full disclosure of ownership on a more regular interval than required by the 13F filings. One might expect that institutions are wary of exceeding this threshold because of the added reporting requirements. By holding a large amount of stock close to the cut-off, these institutions have a larger vested interest in the company but remain relatively hidden from management. As a consequence, there may be a greater incentive to delay holdings information compared to an institution that has exceeded this threshold and is forced to immediately report large trades. In comparing the coefficients on *Above 5%* and *Near 5%*, we observe that those with holdings just below the 5% threshold delay their disclosures about three times longer than an institution above the threshold. In general, institutions with large ownership stakes in companies tend to delay

[15] Log(14046) – Log(355) = 3.67 and given a coefficient on *Log(Size)* of approximately 0.8 this would suggest $0.8 \times 3.67 = 3.01$ or an additional delay of 3 days.

longer but once above the 5% cut-off that entails more frequent reporting, the incentive to delay declines three-fold.

So far, we have discussed the cross-sectional factors important to changing the delay. We are additionally interested in how these variables affect within-institution variation in delays. What causes an institution to delay more in one period than the next? To appropriately analyse the within-institution variation, we need to add fixed effects to the model. Column 6 of Table III repeats the same regression as in Column 5 but includes institutional fixed effects.

Not surprisingly, some of the cross-sectional determinants lose significance but there are some notable and key effects which remain. First, even after controlling for institutional fixed effects, we observe that both hedge funds and non-quasi indexers tend to delay their reporting more in the latter part of the sample after 2006. Similarly, we observe that variations in an institution's level of activeness will cause the same institution to alter its reporting delay. If the same institution increases its turnover or has a more concentrated portfolio or lengthens its own holding period, then this will correspond with longer reporting delays. These results are particularly insightful as they are suggestive that institutions adjust their reporting delays in response to changes in the activeness of their strategies over time.

One of the difficulties in looking at the average delays reported in Figures 5 to 7 and in Table III is it does not give a good perspective of how the distribution of delays is changing. If the average hedge fund is delaying by 42 days in 2013 rather than 39 days in 2000, what is happening to the extreme cases and the portion of funds that are reporting on or after 45 days? Figures 8 and 10 suggest that extreme reporting could be affected quite significantly even if the average delay is increasing only by a day or two. Looking only at average delays hides whether the increase is coming from a small increment by all funds or a large increment by a few. To better measure the severity of the delay, Table IV models what factors affect the probability of an institution reporting on or after 45 days. It is a multivariate logit model using the same independent variables as in Columns 1 to 5 in Table 3 but with a

different dependent variable, *Delay Dummy*, which takes the value 1 if a delay is 45 days or more and 0 otherwise. The other difference between Tables III and IV is that Table IV does not include fixed institutional effects or day-of-week effects to measure within-institution variation in delay since the binary nature of the dependent variable makes it impossible to estimate both. This logit analysis is therefore not meant to shed light on how an institution alters the decision to delay from one quarter to the next. Instead, Column 6 of Table IV provides marginal effects of the complete logistic model to gain an economic understanding of how the extreme part of the distribution is affected by the same cross-sectional variables used to explain *Delay*.

A few observations can be drawn. First it is clear that the patterns observed in our figures and in Table III are echoed in the binary model. Hedge funds and non-quasi indexers tend to report on or after 45 days more often than other institutional types. There is also an upward trend in the probability of reporting after 45 days over time with this trend driven mainly by hedge funds and non-quasi indexers. When we look at the marginal effects in Column 6 of Table IV, being a hedge fund (non-quasi indexer) increases the probability of reporting on or after 45 days by 2.44% (1.86%) in the pre-2006 period and by 8.96% (5.19%), after 2006.[16] This is economically large when the overall probability of a 45+ day delay is around 30% for the full sample. To compare with the results in Table III, we observe that average reporting time is approximately 1 day longer for hedge funds than non-hedge funds pre-2006 and about 1.9 days longer after 2006. These same averages correspond to hedge funds being 2.44% more likely to file on or after 45 days in the pre-2006 period and 8.96% more likely post-2006. Clearly the average delay is moving up because there is a significant increase in the extreme delays on or past 45 days.

The remaining control variables enter significantly and in a way which is consistent with the earlier results in Table III. The one notable difference is the lagged binary delay dummy enters with a coefficient close to 2. Economically if an institution delayed 45 days or more

[16]We arrive at these estimates by adding the coefficients on *Hedge Fund* and *Hedge Fund* × *Post-2006* and similar adding the coefficients on *NQI* and *NQI* × *Post-2006*.

in the past quarter, the likeliness of doing the same this quarter increases by 40.8%. Hedge funds with a tendency to delay are the ones who postpone in the extreme and if one recalls from the descriptive statistics, it is this part of the distribution where we observe the largest changes in delay from quarter to quarter.

We now turn our attention to testing whether concerns of copycats, front-running, or voting will alter reporting delays. The analysis going forward will use fixed effects in all regressions and estimate *Delay* measured in days rather than as a dummy indicator. It is important for all the analysis going forward to include fixed effects as we want to analyze how the same institution changes their decision to delay in response to external factors such as concerns of copycat or predatory traders or upcoming votes. The trade-off of including the fixed effects is having to measure the average length of delay in days rather than estimating the probability of delay extending 45 days or more. Still our estimations in Tables III and IV provide some rough estimate that a 1-day increase in average delay is roughly equivalent to a 1.9-2.4% increase in the likeliness of reporting on or after 45 days.

C. Effect of copycat traders and front-running on reporting

Does the presence of copycat trading or front-running alter an institution's decision of when to report its 13F form? To answer this question regarding the presence of copycat traders, we measure the correlation in trades between time t and $t+1$ and relate this to the timing of the 13F filing at the end of quarter t. We create two correlations variable to identify if the institution's correlation in trades is positive, *Correlation Trade*$^{+}$, or negative, *Correlation Trade*$^{-}$. The prediction is that if institutions intend to trade in the same direction in the subsequent quarter (i.e. a positive correlation in the direction of their trades), they will delay their reporting to prevent copycats from front-running. In contrast, those with a negative correlation in trades may want to take advantage of copycat traders by reporting their 13F holdings right before the time they want to unwind their positions as they will more easily be able to sell to copycat traders. This would imply an incentive to file 13F

holdings earlier in the quarter when trading in the opposite direction.

Table V estimates *Delay* as a function of portfolio trade correlation where correlation is defined using the correlation between changes in the holdings as a percent of shares outstanding, *Correlation Trade*. Using *Correlation Trade*, *Correlation Trades*$^{+}$ and *Correlation Trade*$^{-}$ are defined as max(*Correlation Trade*, 0) and min(*Correlation Trade*, 0) respectively. These variables include institutional fixed effects as the variation that is estimated is measuring within-institutional changes in delay in response to changes in their own trade correlation. The coefficient on both *Correlation Trades*$^{+}$ and *Correlation Trades*$^{-}$ are insignificant so there is no evidence supporting *H1*. Therefore, institutions do not delay their reporting because of copycat trades and do not report early to take advantage of copycat traders when needing to unwind a position.

Although the presence of copycat traders have no effect on delays, what about front-runners? Front-runners use additional information about the institution to guess the direction of trades rather than simply copying what an institution has recently done. We use *Inflows* and *Outflows* as the additional information that a front-runner may use to guess trades of institutions. Absent additional information and trading ideas, we assume that large inflows imply more buying of the same stocks currently in the portfolio and large outflows imply sales from the existing portfolio. *Inflows* and *Outflows* therefore make it easier to predict trades and as a result we expect large absolute values of either to increase the incentive to delay reports, as outlined in *H2*. The predictability in trades based on outflows is better than on inflows so an institution concerned about front-runners would be more responsive in delaying a filing after a large outflow than a large inflow, *H3*.

Table V includes inflows and outflows of the institution over the reporting quarter of the 13F. We see strong evidence that institutions alter their filing dates in response to inflows and outflows since coefficient on both inflows and outflows enter significantly positive even after controlling for fixed institutional effects. As expected, institutions delay their filing dates much more after large outflow than inflows with the coefficient on outflows almost

double that of inflows. When testing the difference between the coefficients on inflows and outflows, the null hypothesis that the two coefficients are equal in the full sample is rejected at the 5% level with a p-value of 0.011. The combined evidence suggests that the same institution will delay its filing if worried about front-runners and this incentive to delay is worse with outflows than inflows.

Front-running is particularly problematic for index and quasi index institutions because trades are much easier to predict with large inflows and outflows. When we separate the sample into hedge funds, non-quasi indexers, and quasi indexers, we observe that quasi indexers appear to be the most concerned with front-running. After both large inflows and outflows, it is only the subgroup of quasi indexers who delay their reporting to prevent traders from front-running their trades. Non-quasi indexers are only concerned about outflows which is consistent if these institutions face restrictions on borrowing so the information of the disclosure reveals more clearly what stocks are to be sold. Hedge funds and non-quasi indexers do not seem to delay longer after large inflows presumably because the information revealed with the holdings data has little information about their intended trades. Recall that the 13F filings only reveal long positions in equities but with the ability to short sell, borrow, or buy derivatives, the 13F filings contain much less information about the intended direction of trades for hedge fund so it is not surprising that hedge funds do not delay their reporting in response to either inflows or outflows since their trades are sufficiently hidden from front-runners at the time of disclosure. In addition, hedge funds concerned with strategies being revealed in a 13F filing are more apt to apply for an exemption using the CT Application.

D. Filing delay around important votes

The last part of our analysis evaluates whether there is evidence that institutions alter their reporting delay around important votes. If activist traders try to hide their ownership from corporations as a mechanism to influence corporate policy, this tendency should be more

aggravated around important votes. Our main test is to determine whether institutions that acquire shares over an important record date try to hide this information from the market by delaying their 13F reports. We use merger votes, shareholder proposals, and management proposals on compensation issues as different examples of important votes where activists may want to hide their ownership from management. Our data on the votes comes from the ISS and each vote is matched with the SEC 14a filings to get the corresponding record date.

The test design for Tables VI to IX is as follows:

1. Identify all stocks which have a record date in quarter t for either a merger vote, shareholder proposal, management proposal on compensation issues, or a management proposal on all non-compensation issues.

2. Identify all the institutions holding these stocks at the end of quarter t-1.

3. Create dummy variables *Buy*, *Sell*, and *No Change* taking the value 1 if the institution holding the stock in quarter t-1, bought, sold, or held the stock in quarter t. The dummy variables are 0 otherwise.

4. For each of the different types of votes, regress the filing delay at the end of quarter t as a function of the institution's decision to buy, sell, or hold the stock in quarter t.

The full regression framework with controls mirrors what is used in Table V except now *Buy*, *Sell*, and *No Change* replace the variables capturing copycat and front-running incentives to delay. Each observation represents every stock j with a voting record date in quarter t that is held by institution i in quarter *t-1*. The regression is therefore written as:

$$\text{Delay}_{j,i,t} = \alpha + \beta_1 \, Buy + \beta_2 \, Sell + \beta_3 \, No\ Change + \beta_4 \, Hedge\ Fund + \beta_5 \, NQI + \beta_6 \, Post\ 2006 + \beta_7 Normalized\ Herfindahl\ Index + {}_8 \, LogSize + \beta_9 \, LogTurnover + \beta_{10} \, Age + \beta_{11} \, Above\ 5\% + {}_{12} Near\ 5\% + \beta_{13} \, Day\text{-}of\text{-}Week\ Dummies + \beta_{14} \, Quarter\ Dummies + \beta_{15} \, Institutional\ Fixed\ Effect + \beta_{16} \, Time\ Fixed\ Effect$$

As outlined in *H4* and *H5*, our goal is to verify whether there is any validity to the claims made to the SEC of activist institutions trying to use the lengthy delay periods to hide ownership around important corporate votes. If true, we predict that activist owners acquiring more of a stake in a company over a voting record date will want to delay their holdings information if they intend to hide their ownership from corporate managers, *H5*. In contrast, if an institution maintains its ownership, the decision not to increase or decrease ownership around the voting record date is a soft indication that the institution is not opposed to current management practices since it has decided not to divest from the firm or gather increased voting strength to vote against management. These institutions may want to reveal ownership earlier to improve corporate communication on proxy issues, *H5*. For institutions which have sold off their ownership in the company, there is no clear reason why this would encourage them to alter the delay period of their 13F forms. Why attempt to alter filing delays to confound voting outcomes when the institution has chosen to vote with its feet and reduce its stake in the company? Overall, we expect a greater incentive to delay 13F reporting after an increase in holdings and an incentive to shorten the delay if exhibiting a passive decision to maintain holdings over a record date.

Table VI presents the results where we first condition on the buy and sell decisions around merger votes. We posit that merger votes attract activist interest in firms and those activist institutions who increase their holdings over the voting record date will have an incentive to delay their reporting. Table VI is divided into 4 panels which estimate the regression over the full sample and then on subsamples of hedge funds, non-quasi indexers, and other. In looking across all subsamples, hedge funds are the only type of institutional group which delay reporting after acquiring more shares over a record date. The effect is large in that buying a greater stake in a company with a merger vote increases the delay by 0.78 of a day which from Table IV corresponds to about 2% increase in the probability of reporting on or after 45 days. The other interesting relationship is that the passive institutions which maintain ownership over the voting record date tend to report their holdings information

earlier presumably to ensure information about the merger is more quickly shared with them. For merger votes, we find support of *H4* amongst the subgroup of activist institutions that would benefit from keeping their ownership hidden and support of *H5* amongst the subgroup of passive institutions making no changes to their portfolio allocations.

Table VII reports the same results for shareholder proposals. Shareholder proposals are proposals that have been submitted by one or more shareholders several months in advance to give management time to incorporate in proxy information. Although not always the case, many of these proposals counter current practices of management so corporations have a vested interest in understanding and, to the extent possible, influencing the outcome of these votes. Institutions wanting to see the shareholder proposal succeed may try to stealthily acquire shares and place pressure on management to change practices. As in Table VI, we see strong evidence of this behavior given the strongly positive and significant coefficient on *Buys* for both hedge funds and non-quasi indexers. In full sample and subsamples of active institutions, selling the shares in the quarter of the record date reduces the incentive to delay reporting since the institution is less exposed to the outcome of the vote. Based on the results in VII, institutions seem to report their holdings earlier if they maintain their position over the record date consistent with *H5*.

Tables VIII and IX are the last set of results looking at delay behavior around voting record dates where the votes are management proposals on compensation and non-compensation issues. As with the previous tables on voting, longer delays arise if an institution has bought a larger stake in the company over the record date. The delay is larger for hedge funds and non-quasi indexers than the remaining funds so activist institutions which accumulate shares seem to be the ones trying to hide their ownership. In contrast, if an institution maintains or decreases its stake in the company, we observe that delays are shorter. The increased ownership over the record date identifies the most active investors interested in influencing the outcome of the vote, while those decreasing or leaving their positions unchanged are perhaps not as interested in altering the vote outcome so are willing

to signal their ownership earlier to management.

The overall results strongly support the conjecture that activist traders are delaying their 13F reporting at the quarter-end of an important voting record date. We find this relation to be the most strong for hedge funds and the non-quasi indexers which have acquired a larger stake in the company. If an institution maintains its position in the company over a voting record date, we identify these institutions as being less interested in the outcome of the vote or more willing to accept or support management views. As a consequence we observe these institutions, in particular passive institutions, tend to report their 13F filings earlier potentially as a way to signal their support.

V. Conclusion

As Lemke and Lins (1987) observe, the primary goals of the 13(f) program were "to facilitate consideration of the influence and impact of institutional managers on the securities markets and the public policy implications of that influence."[17] These considerations do not appear to rely on *fast* disclosure, only *eventual* disclosure. However, as Lemke and Lins (1987) also observe, the disclosures have been put to many other uses, and these other uses can indeed rely on, or at least benefit from, fast disclosure. In this paper, we explore the role of three uses for the disclosures: facilitating copycat trading and front-running, and informing corporate governance actions. The question is whether institutions use their latitude to lag disclosure in response to these uses. The answer is that we find no evidence for an effect of copycatting on lags, but strong evidence for effects of the other two.

The evidence that institutions lag to combat front-running comes from the more exposed institutions, those whose next trades are more predictable due to their close tracking of an index. The response of their disclosure dates to cash flows, especially outflows, suggests that they give themselves time to make the necessary trades before the disclosures can encourage others to trade first. This does not necessarily mean that others would have front-run after

[17] Lemke and Lins (1987), p. 94.

earlier disclosure but it does suggest a concern that would be a trade-off when considering a shorter maximum lag.

The potential effects of lags on corporate governance actions were the original inspiration for the request for a shorter maximum lag. Our evidence supports the concern that votes figure in disclosure lags. Institutions, in particular hedge funds and similar investors, lag more after accumulating shares across a vote's record date, thus making it harder for the affected corporation to adapt its plans to its shifting constituency. This is not necessarily a bad thing, to make it harder for corporations to optimize with respect to who holds their votes, but it does indicate another trade-off when considering a shorter maximum lag.

By assembling the universe of 13F filings and their filing dates, we demonstrate that disclosures are delayed strategically, both to defend against the costs of being front-run, and against the very different costs of corporations knowing sooner who wields their votes. These strategic delays tell us that a tighter constraint on delays, whether to two days or some other maximum, would not come at zero cost to the institutions. Whether these are costs to the corporations they trade or society at large is an interesting question for future research.

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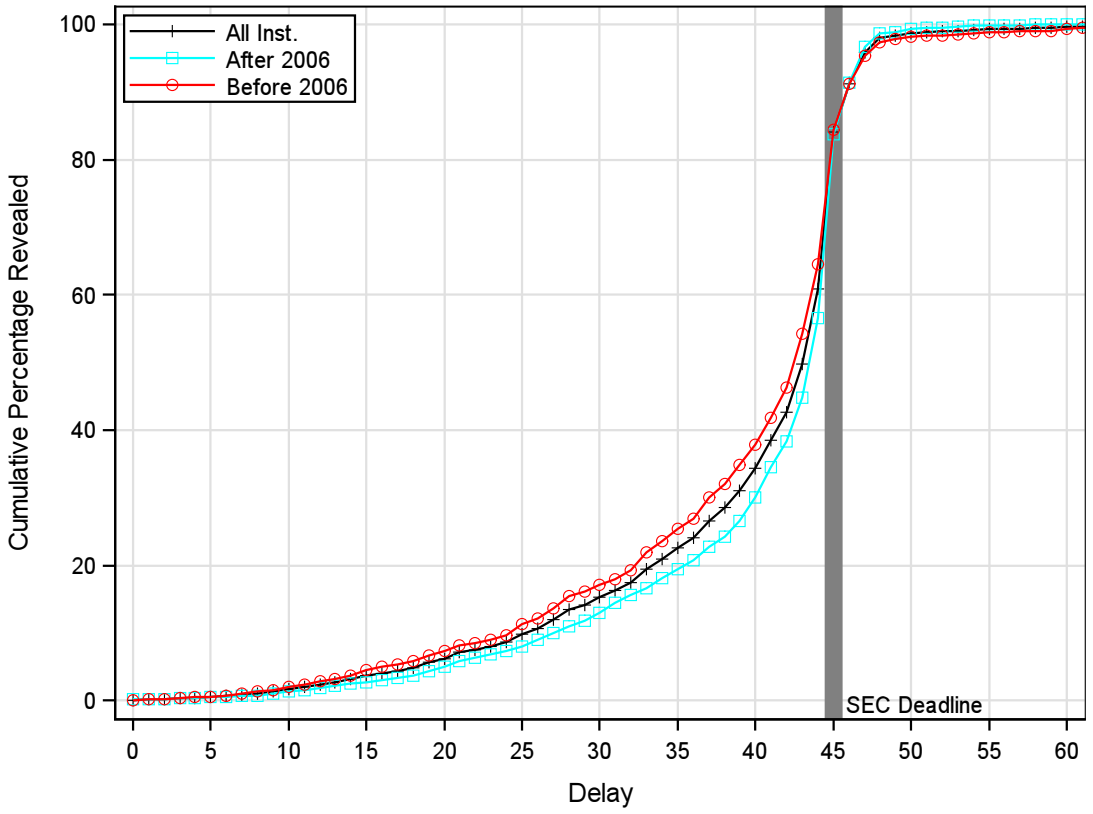

Figure 1. Percentage of shares revealed through subsamples: The figure compares the cumulative percentage of shares out of total shares eventually revealed by 13F filers for the subsamples of pre- and post-2006.

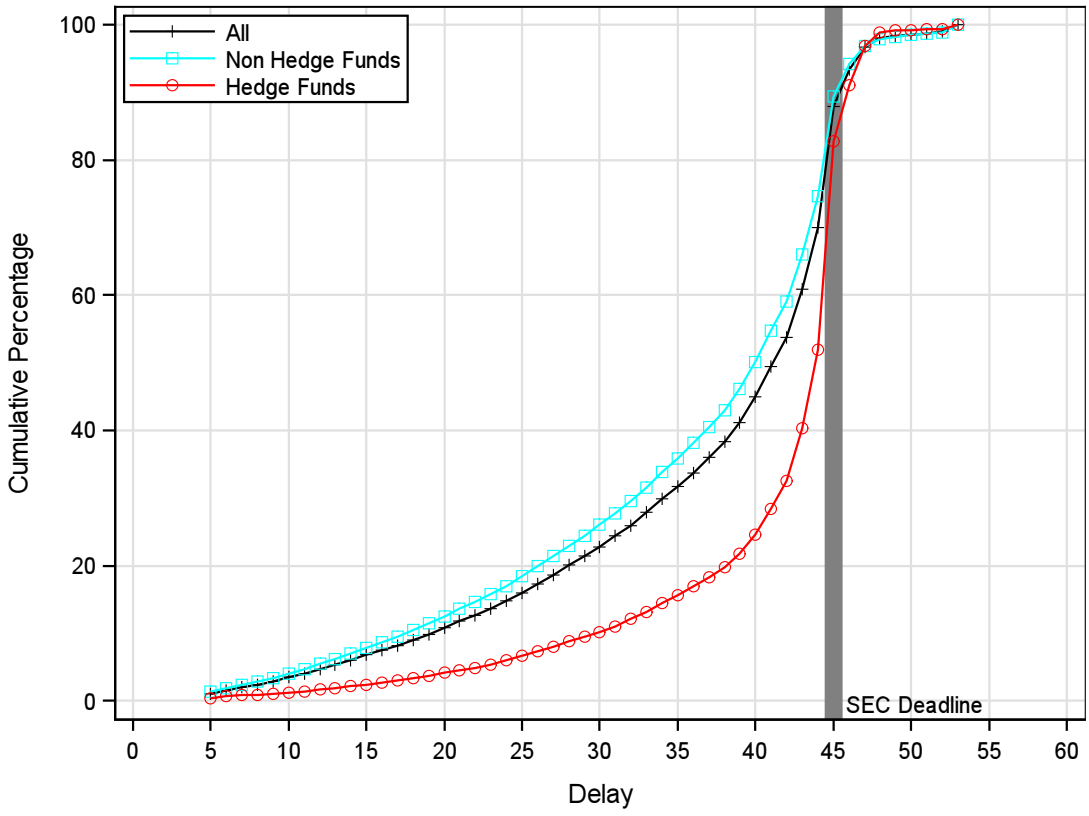

Figure 2. Delay distribution of hedge funds vs. non hedge funds: The figure compares the delay pattern of hedge funds with that of non hedge funds.

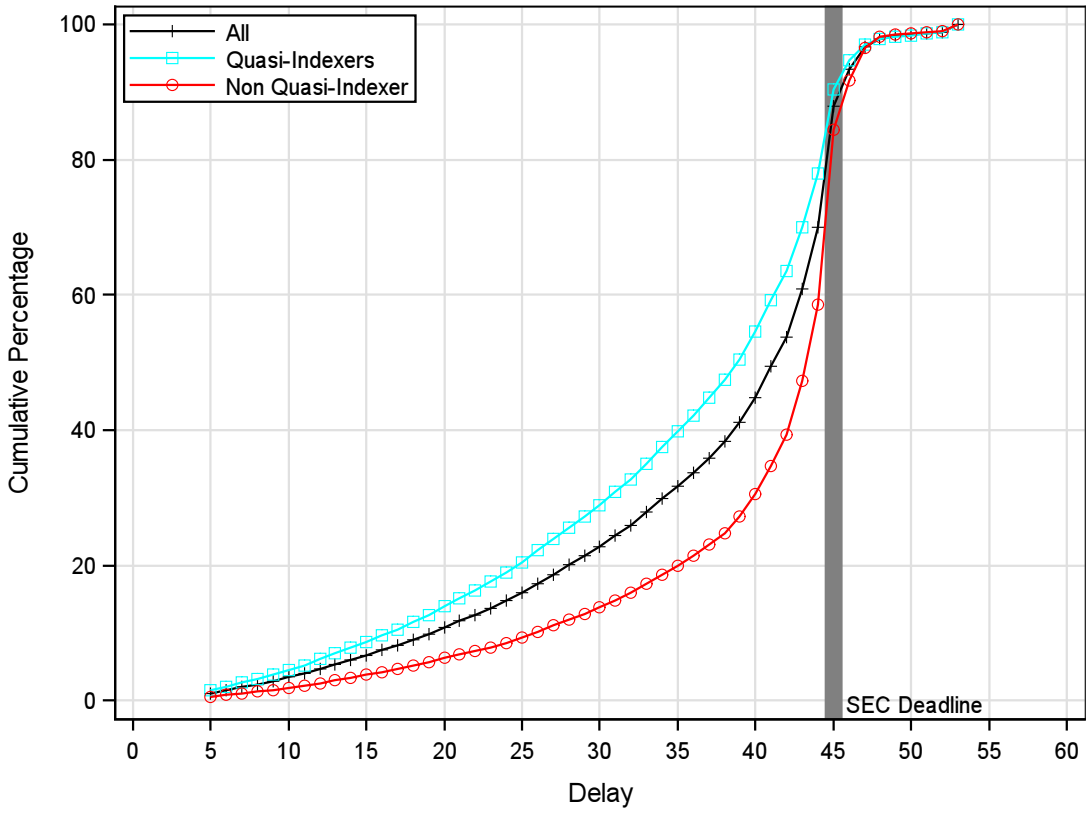

Figure 3. Delay distribution of indexer and non indexer institutions: This figures compares the delay patterns of quasi indexer institutions to that of non quasi indexer institutions.

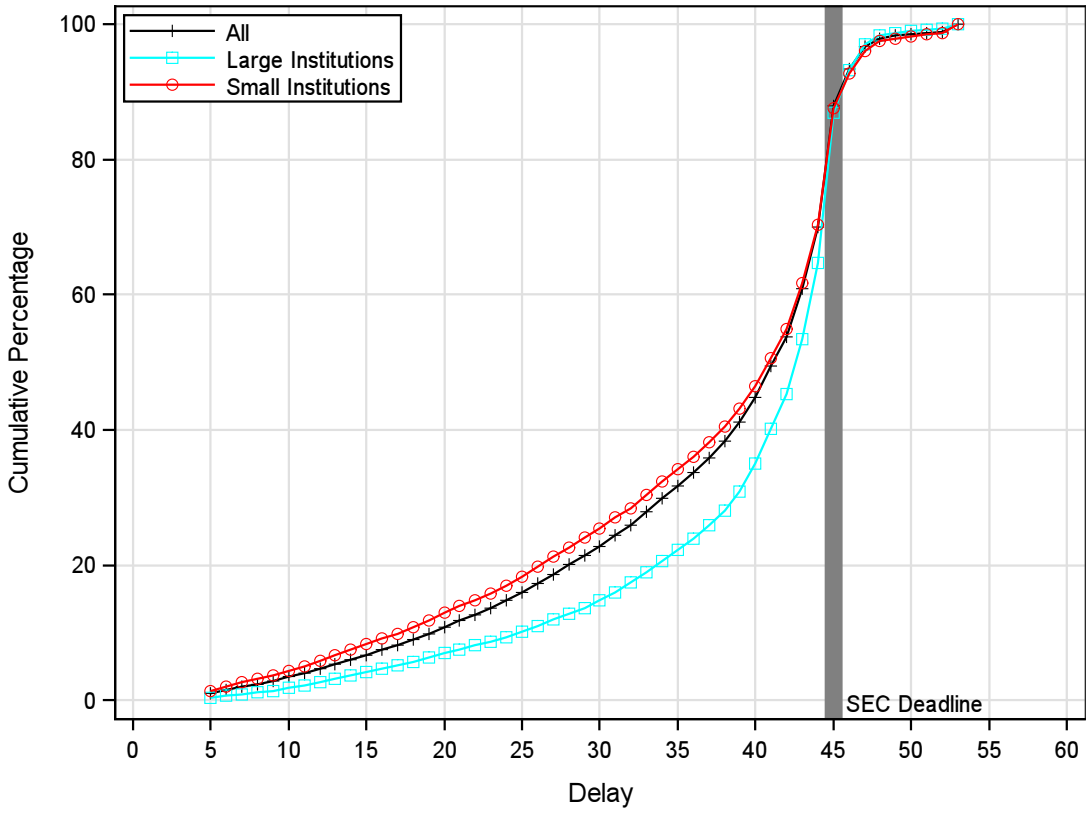

Figure 4. Delay distribution of large vs. small institutions: The figure compares the delay pattern of large institutions with that of small institutions. Large and small institutions are identified quarterly and based on their portfolio size quintile. The ones in the top and bottom quintiles are identified as large and small institutions respectively.

Figure 5. Comparison of time series of average delay between hedge fund and non hedge fund institutions: This figure compares the time series of average delay for hedge fund and non hedge fund institutions over the quarters in our sample.

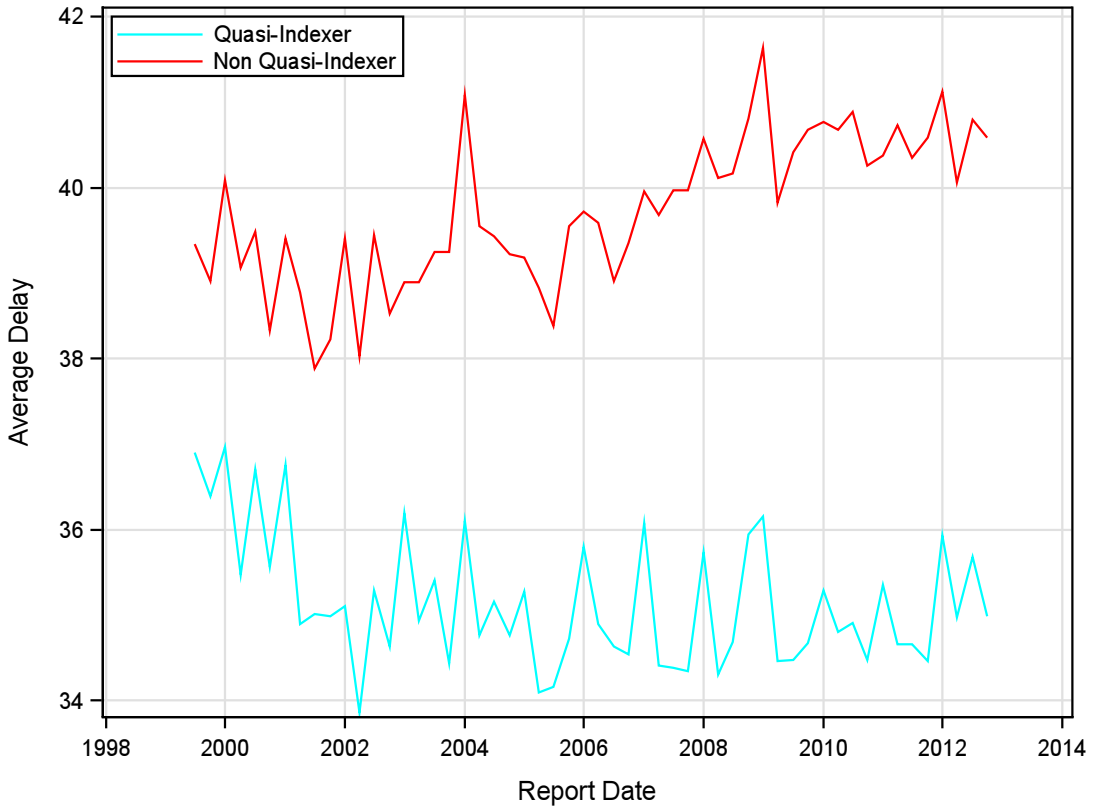

Figure 6. Comparison of time series of average delay between quasi indexer and non quasi indexer institutions: This figure compares the time series of average delay for quasi indexer and non quasi indexer institutions over the quarters in our sample.

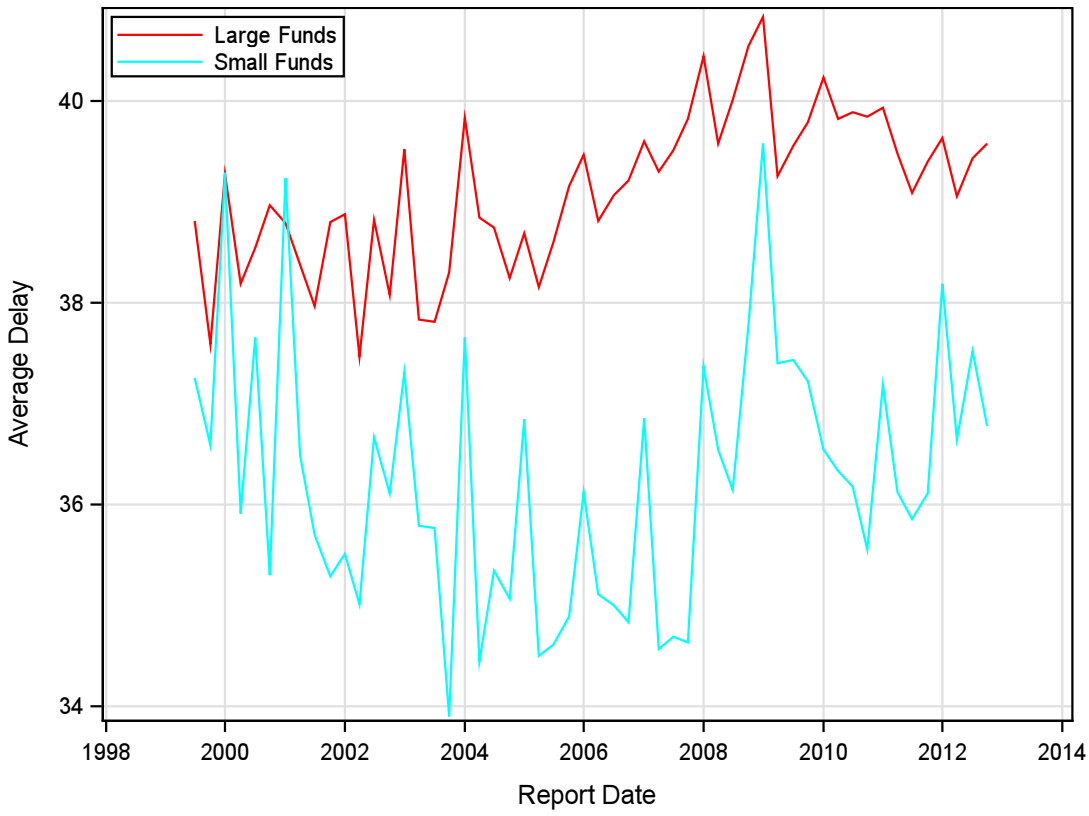

Figure 7. Comparison of time series of average delay between large and small institutions: This figure compares the time series of average delay for large and small institutions over the quarters in our sample. Large and small institutions are identified quarterly and based on their portfolio size quintile. The ones in the top and bottom quintiles are identified as large and small institutions respectively.

Figure 8. Comparison of time series of excess delay (delay $\geq$ 45) between hedge fund and non hedge fund institutions: This figure compares the time series of percentage of hedge fund vs. non hedge fund institutions that have delays equal to or greater than 45 days in each quarter.

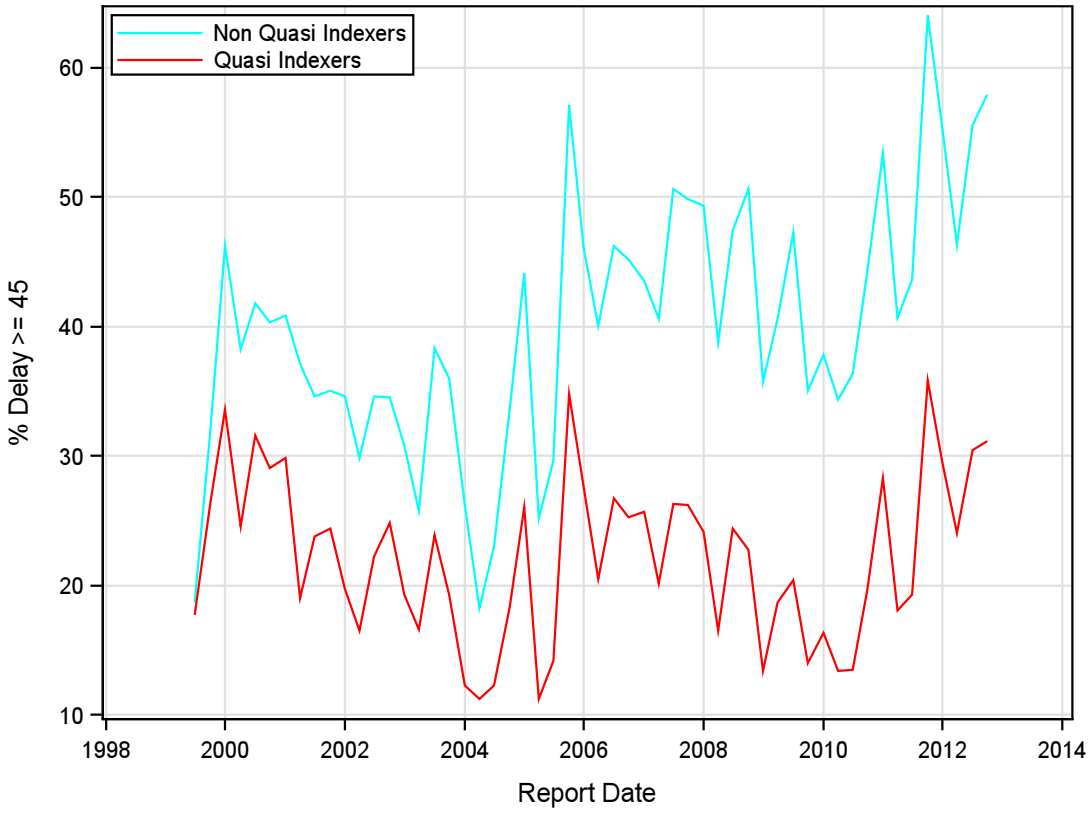

Figure 9. Comparison of time series of excess delay (delay $\geq$ 45) between quasi indexer and non quasi indexer institutions: This figure compares the time series of percentage of quasi indexer vs. non quasi indexer institutions that have delays equal to or greater than 45 days in each quarter.

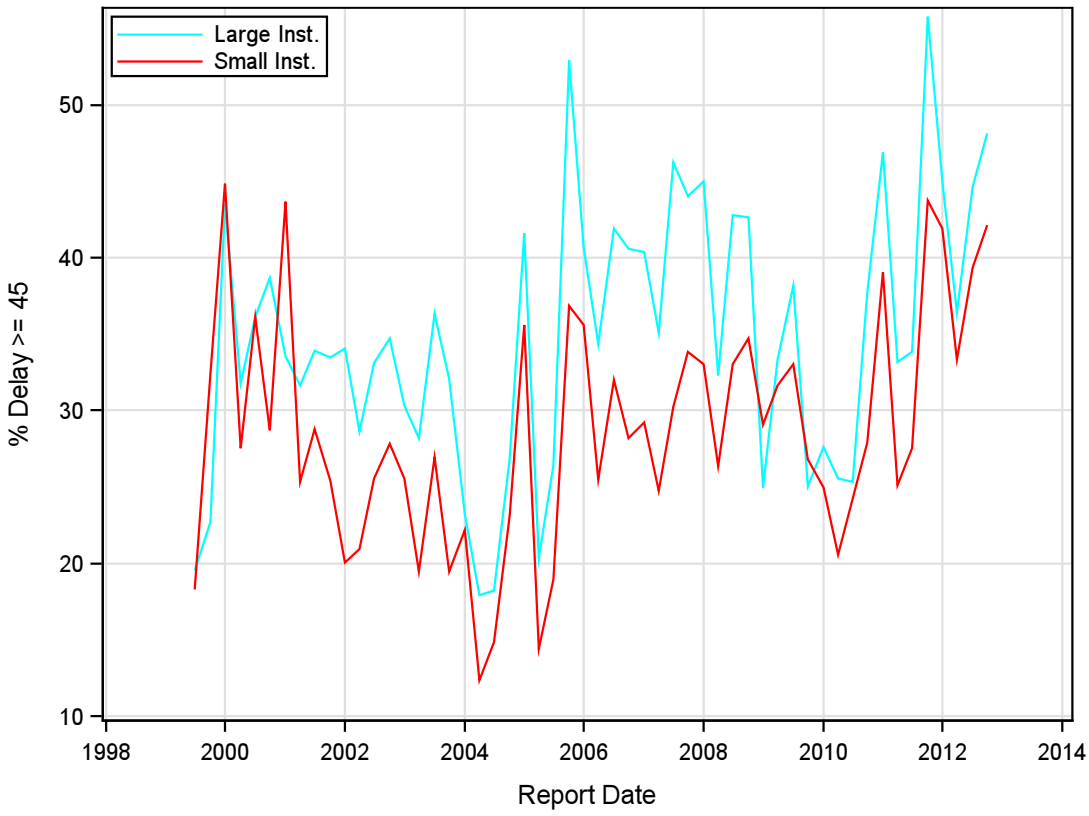

Figure 10. Comparison of time series of excess delay (delay $\geq$ 45) between large and small institutions: This figure compares the time series of percentage of large vs. small institutions that have delays equal to or greater than 45 days in each quarter. Large and small institutions are identified quarterly and based on their portfolio size quintile. The ones in the top and bottom quintiles are identified as large and small institutions respectively.

Table I. Summary Statistics and Matched Sample Analysis: This table reports the summary statistics of the variables used in our paper. The sample is between the first quarter of 1999 and the third quarter of 2012. Panel A shows the results for our matched sample and Panel B shows the results for the institution-quarters that exist in Thomson/Reuters 13F database but we were not able to find any corresponding match from the raw data obtained from the SEC Edgar website. *Delay* is defined as the difference between the end of quarter, *Report Date*, and the day the 13F form is filed by the institution, *File Date*. *Size* is the market value of equity holdings reported in the 13F form by the institution. *Turnover* is the inter-quarter turnover rate calculated by dividing total transactions by *Size*. *Normalized Herfindahl Index* is a measure of concentration of institution's portfolio and is calculated by finding the Herfindahl Index of the institution's portfolio and then normalizing it as described in text. *Average Holding* is a value weighted average of the age of the stocks held in the institution's portfolio. Each stock's age is defined as the number of quarters since the first time the stock was held by the institution. *Fund Age* is defined as the number of quarters since the first appearance of the institution on Thomson Reuters database. *Above 5%* is defined as the fraction of stocks in the portfolio of the institution for which the institution's ownership is greater than 5% of the shares outstanding. Similarly, *Near 5%* is defined as the fraction of stocks in the portfolio of the institution for which the institution's ownership falls between 4% and 5% of the shares outstanding. *Flows* is defined as the percentage change in *Size* over the the quarter adjusted for the returns. *Inflows* is set equal to *Flows* when *Flows* is greater than zero and zero otherwise. *Outflows* is defined in a similar fashion and is equal to the absolute value of *Flows* when *Flows* is less than zero and zero otherwise.

Panel A: Matched sample

			Percentiles					
	N	Mean	5^{th}	25^{th}	50^{th}	75^{th}	95^{th}	Std. Dev.
Delay	116,141	37.081	13.000	32.000	42.000	45.000	47.000	10.774
Size ($ Million)	116,902	3013.493	44.656	146.833	355.085	1372.345	14045.429	9573.667
Turnover	116,211	0.48	0.057	0.151	0.301	0.671	1.313	0.495
Normalized Herfindahl Index	116,898	0.044	0.003	0.008	0.014	0.030	0.171	0.114
Average Holding (Qtrs)	116,898	20.206	1.923	6.799	15.083	28.573	56.474	17.473
Fund Age (Qtrs)	116,902	38.629	2.000	12.000	28.000	59.000	104.000	32.567
Near 5%	116,902	0.009	0.000	0.000	0.000	0.003	0.057	0.023
Above 5%	116,902	0.032	0.000	0.000	0.000	0.013	0.184	0.093
Inflows	50,971	0.162	0.003	0.021	0.058	0.157	0.721	0.291
Outflows	59,341	0.106	0.004	0.019	0.049	0.124	0.439	0.145

Table I. Continued:

Panel B: Data available on Thomson/Reuters but not matched in our sample

			Percentiles					
	N	Mean	5^{th}	25^{th}	50^{th}	75^{th}	95^{th}	Std. Dev.
Size ($ Million)	16,812	3049.467	10.577	114.794	289.620	948.418	13283.464	10744.838
Turnover	16,106	0.509	0.046	0.135	0.282	0.817	1.391	0.565
Normalized Herfindahl Index	16,811	0.118	0.004	0.010	0.019	0.062	0.997	0.250
Average Holding (Qtrs)	16,801	21.254	1.000	6.142	15.039	31.087	61.999	19.635
Fund Age (Qtrs)	16,812	39.344	2.000	11.000	29.000	62.000	106.000	33.692
Near 5%	16,812	0.009	0.000	0.000	0.000	0.000	0.063	0.027
Above 5%	16,812	0.062	0.000	0.000	0.000	0.016	0.500	0.159
Inflows	6,192	0.178	0.001	0.019	0.055	0.165	0.949	0.329
Outflows	8,773	0.118	0.002	0.017	0.049	0.136	0.551	0.166

Table II. Sample composition by institution type: This table shows the composition of our sample in pre- and post-2006 subsamples. The institutions types are obtained from Brian Bushee's website. He also identifies financial institutions as quasi indexers and non quasi indexers. Hedge funds are identified using Griffin and Xu (2009) augmented by the list of hedge funds obtained from InsiderMonkey website.

Sample Composition	Pre 2006	Post 2006
Brian Bushee Institution Type		
Bank Trust	7.63%	6.10%
Insurance Company	1.87%	1.30%
Investment Company	74.81%	79.80%
Independent Investment Advisor	3.08%	1.88%
Corporate (Private) Pension Fund	3.00%	1.44%
Public Pension Fund	8.20%	8.23%
University and Foundation Endowments	0.76%	0.88%
Miscellaneous	0.64%	0.36%
Hedge Funds	17.23%	19.58%
Non Quasi Indexers	35.90%	38.63%

Table III. Determinants of filing delay: This table reports results on determinants of delay in filing 13F forms. All the regression use ordinary least squares method and include time fixed effect dummies. Column (6) includes institution fixed effect dummies as well. Reported are the coefficients and their t-statistics (in parentheses). The dependent variable in all the regressions is the number of days between the filing date and the end of quarter, *Delay*. Coefficient marked with **, and * are significant at the 1% and 5% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Hedge Fund	1.723**			1.634**	1.112**	0.298
	(21.86)			(20.28)	(8.31)	(0.19)
NQI		1.055**		0.820**	0.383**	-1.846
		(13.66)		(10.51)	(3.37)	(-1.22)
Post 2006			1.511**	1.286**	0.891*	-0.462
			(4.29)	(3.62)	(2.49)	(-1.94)
Hedge Funds × Post 2006					0.800**	0.390**
					(4.88)	(2.61)
NQI × Post 2006					0.710**	0.698**
					(5.39)	(5.63)
Lag(Delay)	0.239**	0.239**	0.241**	0.237**	0.237**	0.0720**
	(142.57)	(141.43)	(144.36)	(140.64)	(140.43)	(49.81)
Norm. Herfindahl Index	6.370**	6.111**	4.979**	6.134**	6.063**	-0.208
	(18.01)	(16.48)	(16.44)	(16.57)	(16.38)	(-0.47)
Log(Size)	0.838**	0.865**	0.856**	0.843**	0.841**	0.401**
	(42.90)	(43.54)	(44.12)	(42.44)	(42.37)	(10.29)
Avg. Holding (Qtrs)	-0.0232**	-0.0259**	-0.0302**	-0.0212**	-0.0213**	-0.00572
	(-6.83)	(-7.58)	(-9.00)	(-6.18)	(-6.21)	(-0.97)
Log(Turnover)	1.755**	1.626**	1.930**	1.519**	1.510**	0.552**
	(52.05)	(40.44)	(59.46)	(37.53)	(37.30)	(12.36)
Fund Age (Qtrs)	-0.0116**	-0.0102**	-0.00944**	-0.0116**	-0.0114**	0.0174*
	(-7.01)	(-6.10)	(-5.72)	(-6.94)	(-6.85)	(2.10)
Above 5%	7.011**	7.055**	7.354**	6.433**	6.389**	0.510
	(17.64)	(17.25)	(19.62)	(15.72)	(15.61)	(0.84)
Near 5%	18.37**	22.08**	22.50**	18.94**	18.93**	-0.940
	(12.71)	(15.02)	(16.02)	(12.83)	(12.83)	(-0.65)
Tuesday	1.043**	0.944**	1.077**	0.931**	0.924**	0.449*
	(4.03)	(3.58)	(4.17)	(3.54)	(3.52)	(2.52)
Wednesday	0.842**	0.787**	0.887**	0.764**	0.755**	0.246
	(3.22)	(2.94)	(3.40)	(2.86)	(2.83)	(1.01)
Thursday	-0.144	-0.217	-0.171	-0.206	-0.214	-0.403
	(-0.57)	(-0.85)	(-0.68)	(-0.80)	(-0.84)	(-1.62)
Friday	0.392	0.331	0.394	0.319	0.314	-0.112
	(1.54)	(1.29)	(1.55)	(1.24)	(1.22)	(-0.55)
Saturday	-0.926**	-0.917**	0.469	0.452	0.448	1.310**
	(-2.65)	(-2.59)	(1.86)	(1.77)	(1.75)	(4.34)
Friday	0.0934	0.0563	0.0542	0.0455	0.0423	1.100**
	(0.37)	(0.22)	(0.22)	(0.18)	(0.17)	(3.80)
Constant	13.45**	12.70**	12.14**	11.55**	11.82**	26.60**
	(32.93)	(30.54)	(22.17)	(20.77)	(21.24)	(26.22)
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Inst. Fixed Effects	No	No	No	No	No	Yes
Observations	106055	104211	106910	104211	104211	104211
R^2	0.261	0.259	0.257	0.262	0.262	0.581

Table IV. Determinants of Delay $\geq$ 45: This table reports results for the logistic model that studies the determinants of delays equal to or in excess of 45 days. Columns (1)-(5) report the regression coefficients along with their t-statistics (in parentheses). Column (6) reports the marginal effects corresponding to the model in column (5). Coefficients marked with **, and * are significant at the 1%, and 5% level, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Hedge Fund	0.392**			0.370**	0.134**	0.0244**
	(18.90)			(17.51)	(3.74)	(3.74)
NQI		0.265**		0.216**	0.103**	0.0186**
		(12.59)		(10.11)	(3.25)	(3.25)
Post 2006			1.313**	1.265**	1.118**	0.203**
			(12.16)	(11.53)	(10.13)	(10.13)
Hedge Funds × Post 2006					0.359**	0.0652**
					(8.23)	(8.22)
NQI × Post 2006					0.184**	0.0333**
					(5.04)	(5.04)
Lag(Delay $\geq$ 45)	2.262**	2.276**	2.291**	2.256**	2.248**	0.408**
	(131.84)	(131.31)	(134.50)	(129.84)	(129.18)	(126.04)
Norm. Herfindahl Index	0.923**	0.848**	0.714**	0.860**	0.844**	0.153**
	(9.76)	(8.61)	(8.76)	(8.74)	(8.55)	(8.56)
Log(Size)	0.108**	0.112**	0.115**	0.106**	0.105**	0.0191**
	(19.61)	(20.06)	(21.24)	(18.96)	(18.89)	(18.95)
Avg. Holding (Qtrs)	-0.00186	-0.00260**	-0.00419**	-0.00119	-0.00122	-0.000221
	(-1.88)	(-2.62)	(-4.31)	(-1.20)	(-1.22)	(-1.22)
Log(Turnover)	0.312**	0.273**	0.350**	0.246**	0.244**	0.0443**
	(32.04)	(23.57)	(37.25)	(21.09)	(20.91)	(20.99)
Fund Age (Qtrs)	-0.00273**	-0.00237**	-0.00204**	-0.00278**	-0.00279**	-0.000506**
	(-5.78)	(-5.01)	(-4.39)	(-5.85)	(-5.87)	(-5.87)
Above 5%	1.706**	1.658**	1.757**	1.534**	1.526**	0.277**
	(16.41)	(15.59)	(18.05)	(14.34)	(14.24)	(14.22)
Near 5%	3.492**	4.422**	4.347**	3.758**	3.773**	0.684**
	(9.20)	(11.54)	(11.86)	(9.72)	(9.72)	(9.71)
Constant	-4.377**	-4.529**	-4.416**	-4.484**	-4.381**	
	(-30.52)	(-31.20)	(-30.96)	(-30.85)	(-30.14)	
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Inst. Fixed Effects	No	No	No	No	No	No
Observations	106055	104211	106910	104211	104211	104211
Pseudo R^2	0.255	0.253	0.252	0.255	0.256	

Table V. Delay and trade predictability: This table reports the results of regressions that test the hypothesis that filing delay is affected by an institution's concerns about copycats and predatory traders. The correlation variables in this table are calculated based on changes in number of shares out of shares outstanding held by the institution as defined in text. All the regressions use ordinary least squares method and include time and institution fixed effect dummies as well as day-of-week dummies. Coefficients marked with **, and * are significant at 1%, and 5% level, respectively.

	(1)	(2)	(3)	(4)
	All	Hedge Funds	Non Quasi Indexers	All except Hedge Funds and Non Quasi Indexers
Correlation Trade $^{+}$	-0.0522	0.00133	0.240	-0.136
	(-0.49)	(0.01)	(1.33)	(-0.95)
Correlation Trade $^{-}$	0.0684	0.393	0.228	-0.0280
	(0.57)	(1.77)	(1.31)	(-0.16)
Inflows	0.434**	0.170	0.183	1.186**
	(3.32)	(0.93)	(1.32)	(4.04)
Outflows	1.074**	0.487	0.737*	2.153**
	(3.86)	(1.19)	(2.33)	(3.84)
Norm. Herfindahl Index	-0.314	-0.678	0.276	-2.039*
	(-0.68)	(-0.85)	(0.51)	(-2.15)
Log(Size)	0.474**	0.320**	0.394**	0.552**
	(11.67)	(5.02)	(8.17)	(7.74)
Avg. Holding (Qtrs)	-0.0141*	-0.0153	0.0137	-0.0199*
	(-2.41)	(-1.42)	(1.62)	(-2.31)
Log(Turnover)	0.471**	0.296**	0.294**	0.478**
	(9.05)	(2.82)	(3.49)	(6.31)
Fund Age (Qtrs)	0.0174*	0.0285	-0.00231	-0.0292*
	(2.12)	(1.96)	(-0.19)	(-2.40)
Above 5%	0.612	1.550*	-0.491	2.019
	(1.01)	(2.16)	(-0.72)	(1.41)
Near 5%	-1.450	-1.419	-2.354	1.754
	(-1.01)	(-0.87)	(-1.42)	(0.57)
Post 2006	-0.0267	-0.350	0.0358	0.228
	(-0.11)	(-0.86)	(0.11)	(0.67)
Constant	27.33**	33.52**	31.75**	26.18**
	(31.59)	(25.05)	(30.94)	(17.80)
Inflows=Outflows (F-test)	6.41	0.74	3.78	3.32
p-value	0.011	0.390	0.052	0.069
Observations	106705	20177	39111	59699
R^2	0.571	0.544	0.547	0.542

Table VI. Delay and merger events: This table reports the results of regressions that test the hypothesis that filing delay might be affected by the merger and acquisitions events on the stocks held in the portfolio of the institution. We run regressions on the full sample, subsample of hedge funds, subsample of non quasi indexers, and the subsample that excludes hedge funds and non quasi indexers. All the regression include control variables as well as fixed effects for institutions and quarters and day-of-week dummies. Coefficients marked with **, and * are significant at the 1%, and 5% level, respectively.

Panel A: Full Sample				
	(1) Delay	(2) Delay	(3) Delay	(4) Delay
Buy	0.166 (1.37)			0.400* (2.22)
Sell		0.0226 (0.18)		0.328 (1.76)
No Change			-0.369* (-2.16)	
Observations	21813	21813	21813	21813
R^2	0.559	0.559	0.559	0.559
Panel B: Hedge Fund Subsample				
Buy	0.780* (2.27)			0.140 (0.27)
Sell		-1.030** (-2.82)		-0.920 (-1.70)
No Change			0.267 (0.55)	
Observations	2539	2539	2539	2539
R^2	0.583	0.583	0.582	0.583
Panel C: Non Quasi Indexers Subsample				
Buy	0.0427 (0.21)			-0.0800 (-0.24)
Sell		-0.0978 (-0.45)		-0.164 (-0.46)
No Change			0.113 (0.35)	
Observations	6441	6441	6441	6441
R^2	0.546	0.546	0.546	0.546
Panel D: The Rest Subsample				
Buy	0.0846 (0.55)			0.504* (2.29)
Sell		0.224 (1.43)		0.595** (2.64)
No Change			-0.546** (-2.64)	
Observations	14091	14091	14091	14091
R^2	0.559	0.559	0.559	0.559

Table VII. Delay and shareholder proposals events: This table reports the results of regressions that test the hypothesis that filing delay might be affected by the shareholder proposal events on the stocks held in the portfolio of the institution. We run regressions on the full sample, subsample of hedge funds, subsample of non quasi indexers, and the subsample that excludes hedge funds and non quasi indexers. All the regression include control variables as well as fixed effects for institutions and quarters and day-of-week dummies. Coefficients marked with **, and * are significant at the 1%, and 5% level, respectively.

Panel A: Full Sample				
	(1) Delay	(2) Delay	(3) Delay	(4) Delay
Buy	0.108** (7.85)			0.123** (5.40)
Sell		-0.0804** (-5.75)		0.0195 (0.84)
No Change			-0.0751** (-3.45)	
Observations	1293343	1293343	1293343	1293343
R^2	0.546	0.546	0.546	0.546
Panel B: Hedge Funds Subsample				
Buy	0.304** (7.96)			0.135* (2.06)
Sell		-0.329** (-8.31)		-0.215** (-3.16)
No Change			0.00646 (0.10)	
Observations	127646	127646	127646	127646
R^2	0.517	0.517	0.517	0.517
Panel C: Non Quasi Indexers Subsample				
Buy	0.270** (11.81)			0.299** (6.80)
Sell		-0.228** (-9.69)		0.0353 (0.78)
No Change			-0.193** (-4.50)	
Observations	365380	365380	365380	365380
R^2	0.508	0.508	0.508	0.508
Panel D: The Rest Subsample				
Buy	0.0138 (0.79)			0.0433 (1.56)
Sell		0.00419 (0.24)		0.0381 (1.36)
No Change			-0.0408 (-1.55)	
Observations	872336	872336	872336	872336
R^2	0.541	0.541	0.541	0.541

Table VIII. Delay and Management Proposals (Compensation): This table reports the results of regressions that test the hypothesis that filing delay might be affected by compensation related management proposal events on the stocks held in the portfolio of the institution. We run regressions on the full sample, subsample of hedge funds, subsample of non quasi indexers, and the subsample that excludes hedge funds and non quasi indexers. All the regression include control variables as well as fixed effects for institutions and quarters and day-of-week dummies. Coefficients marked with **, and * are significant at the 1%, and 5% level, respectively.

Panel A: Full Sample				
	(1) Delay	(2) Delay	(3) Delay	(4) Delay
Buy	0.0947**			0.159**
	(7.31)			(7.57)
Sell		-0.0452**		0.0848**
		(-3.37)		(3.89)
No Change			-0.128**	
			(-6.33)	
Observations	1448567	1448567	1448567	1448567
R^2	0.537	0.537	0.537	0.537
Panel B: Hedge Fund Subsample				
Buy	0.207**			0.282**
	(5.58)			(4.59)
Sell		-0.138**		0.0994
		(-3.52)		(1.53)
No Change			-0.216**	
			(-3.62)	
Observations	156144	156144	156144	156144
R^2	0.494	0.494	0.494	0.494
Panel C: Non Quasi Indexers Subsample				
Buy	0.173**			0.235**
	(8.09)			(5.98)
Sell		-0.128**		0.0769
		(-5.76)		(1.88)
No Change			-0.175**	
			(-4.58)	
Observations	455265	455265	455265	455265
R^2	0.494	0.494	0.494	0.494
Panel D: The Rest Subsample				
Buy	0.0441**			0.121**
	(2.67)			(4.69)
Sell		0.00725		0.103**
		(0.43)		(3.88)
No Change			-0.114**	
			(-4.60)	
Observations	929363	929363	929363	929363
R^2	0.547	0.547	0.547	0.547

Table IX. Delay and Management Proposals (Non Compensation): This table reports the results of regressions that test the hypothesis that filing delay might be affected by non-compensation related management proposal events on the stocks held in the portfolio of the institution. We run regressions on the full sample, subsample of hedge funds, subsample of non quasi indexers, and the subsample that excludes hedge funds and non quasi indexers. All the regression include control variables as well as fixed effects for institutions and quarters and day-of-week dummies. Coefficients marked with **, and * are significant at the 1%, and 5% level, respectively.

Panel A: Full Sample				
	(1) Delay	(2) Delay	(3) Delay	(4) Delay
Buy	0.117** (5.09)			0.162** (4.27)
Sell		-0.0752** (-3.14)		0.0588 (1.49)
No Change			-0.120** (-3.28)	
Observations	483390	483390	483390	483390
R^2	0.530	0.530	0.530	0.530
Panel B: Hedge Fund Subsample				
Buy	0.374** (5.66)			0.385** (3.47)
Sell		-0.312** (-4.47)		0.0143 (0.12)
No Change			-0.249* (-2.31)	
Observations	51765	51765	51765	51765
R^2	0.491	0.491	0.491	0.491
Panel C: Non Quasi Indexers Subsample				
Buy	0.189** (4.90)			0.242** (3.36)
Sell		-0.147** (-3.68)		0.0656 (0.88)
No Change			-0.178* (-2.53)	
Observations	148808	148808	148808	148808
R^2	0.489	0.488	0.488	0.489
Panel D: The Rest Subsample				
Buy	0.0481 (1.65)			0.101* (2.17)
Sell		-0.0108 (-0.36)		0.0704 (1.46)
No Change			-0.0881* (-1.98)	
Observations	312892	312892	312892	312892
R^2	0.537	0.537	0.537	0.537