Do Hedge Funds Strategically Misreport Their Holdings? Evidence from 13F Restatements *

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ABSTRACT

Hedge funds can subsequently amend their originally reported 13F quarterly holdings using restatements. We conduct the first systematic analysis of such filings, which are as common as confidential filings (used by funds to delay holding disclosures) but affect three times as many stocks. Restated holdings are associated with significant abnormal returns, suggesting that some original holdings are strategically misreported to hide funds' trading intentions, and later restatements facilitate copycat trading and price convergence. We construct a restatement return gap measure to gauge the value added by such restatements, and find that a positive return gap is predictive of superior future fund performance.

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1 Introduction

On July 10, 2020, the Securities and Exchange Commission (SEC) proposed a significant change to the reporting threshold for Form 13F, raising it from $100 million to $3.5 billion.[1] Originally implemented in 1975, Form 13F required investment managers with more than $100 million under investment to report their equity holdings quarterly. Over the subsequent 45 years, the number of 13F filers increased dramatically. However, with the exponential growth in reporting volume, systematic checks for accuracy were absent, and no fines were imposed for erroneous data.[2] Despite the proposed increase in the reporting threshold, the plan faced strong opposition from CEOs, investment managers, major stock exchanges, institutional investors, and academics. Consequently, it was ultimately abandoned, indicating the perceived value of 13F holdings reporting within the investment community.[3] This pushback also underscores the importance attached to 13F filings, despite potential reporting errors.

The mandatory disclosure of institutional holdings on Form 13F provides valuable information to market participants. Corporate executives monitor these filings to identify their shareholders and detect potential activist campaigns through share accumulation. Investment managers likewise utilize these disclosures to implement front-running and copycat trading strategies (Cao et al., 2021). Consequently, fund managers often request SEC permission to delay the disclosure of "confidential holdings", which have been found to be highly informative (Agarwal et al., 2013, "AJTY" hereafter; Aragon et al., 2013).

[1] Source: "Statement on the Proposal to Substantially Reduce 13F Reporting," July 10, 2020, by SEC Commissioner Allison Herren Lee.

[2] For instance, according to an SEC internal audit review in 2010, "as a general matter, apart from the review of Form 13F as a result of an institutional investment manager's request for confidential treatment of Form 13F information, the majority of the monitoring or checking of this information by IM is performed only after a member of the public notifies IM of an error in or problem with a Form 13F, or IM receives a referral from another SEC division or office." Source: Review of the SEC's Section 13(f) Reporting Requirements, 2010, SEC Office of Inspector General. Available at https://www.sec.gov/files/480.pdf.

[3] Source: "Hedge Funds' SEC Reporting Loss Is Actually a Win," by Aaron Brown, October 29, 2020, *Bloomberg*.

Beyond confidential filings, managers may also submit 13F restatements to correct prior reporting errors. Our study focuses specifically on hedge funds, which represent particularly informative filers with strong incentives to avoid disclosure. In our sample of 1,550 hedge fund companies, restatements occur with similar frequency to confidential filings, each comprising 3.20% of all 13F filings. Despite their prevalence, the strategic use of restatements by hedge funds remains largely unexplored. Our paper aims to fill this important gap in the literature.

Although the SEC permits investment companies to file restatements to correct honest errors in previous 13F filings, hedge fund managers may also use them to correct intentionally misreported holdings. For example, a manager might begin trading based on a transient private signal prior to quarter-end. When the original filing is subsequently due (within 45 days of the quarter-end), the manager may still be building their position, leading them to misreport quarter-end holdings to hide their trading strategy. Later, once the private information becomes public and loses its value, the manager can file a restatement to amend the initial filing. Moreover, after establishing their desired position, the manager might even use the restatement to prompt copycat trading, thereby accelerating price convergence. Given the SEC's limited systematic oversight of 13F filing accuracy, managers likely view such temporary misreporting between the original filing and the restatement as a low-risk strategy.[4]

Under the null hypothesis that restatements correct only honest mistakes, restated holdings should not be associated with abnormal returns. To test this, we calculate daily abnormal returns using the Carhart (1997) four-factor model. Our results strongly reject the null hypothesis: restated holdings yield 3.622 basis points (bps) in daily abnormal returns, equivalent to an annualized return

[4]It is worth noting that penalties for violation of 13F filing rules are rather rare, with only one well-known case resulting in a penalty of $100,000 for failing to file the 13F form for an extended period (Quattro Global Capital, LLC). No penalties specifically related to restatements have been identified. However, the absence of realized penalties does not imply a lack of cost associated with the strategic use of restatements, as the SEC has the potential to allocate additional resources to monitor 13F filings and initiate retrospective enforcement actions (Fang et al., 2022).

of 9.13%, significantly outperforming their original portfolio counterparts during the restatement period. These abnormal returns are particularly concentrated in the interval between the original 13F filing and the restatement filing date, during which the daily Carhart (1997) four-factor alpha reaches 18.5 bps.

We next investigate whether these abnormal returns vary with the timeliness of restatements, which would align with strategic, information-driven misreporting. When hedge funds acquire private information but cannot complete position adjustments by the original filing deadline, they may intentionally misreport holdings to preserve informational value. Since regulatory requirements mandate prompt disclosure of material information, this advantage is transient. Restatements filed shortly after the original filing are therefore likely corrections of intentional misreporting meant to hide ongoing trades. As predicted, we find that the most promptly filed restatements exhibit the strongest abnormal returns. For example, restatements submitted in the immediate subsequent quarter generate a daily Carhart (1997) four-factor alpha of 42.2 bps, significantly exceeding those with longer lags. This pattern indicates that promptly filed restatements often reflect strategic misreporting in the initial 13F filing.[5]

An important distinction between restatements and confidential filings is that restatements can reveal strategic misreporting that conceals both share accumulations and sell-offs. After classifying each restated holding as acquisition or disposition motivated by comparing true positions across two consecutive quarters, we analyze their abnormal returns separately. We document significantly higher abnormal returns for acquisition-motivated holdings, but find no significant underperformance among disposition-motivated holdings. This contrast suggests that non-informative motives, such as liquidity needs, may offset the negative return effects of disposition-related corrections. Al-

[5]We exclude 337 restatements filed within five days of original filings from our main analyses, as their proximity suggests error corrections rather than strategic behaviour.

ternatively, hedge funds may explore negative private information by shorting the stock directly.

Building on these findings, we examine the economic motives underlying restatement filings. Restated holdings experience significantly more firm information disclosures between the original filing date and the restatement date, supporting the view that managers possess private information related to these events. Once such information becomes public, managers correct their misreported holdings via restatements. Moreover, the timing of restatements may be strategically chosen to induce copycat trading and expedite price convergence after the fund completes its position adjustments. Consistent with this, we find significant cumulative abnormal returns for restated holdings during the five days following restatement filings.

We also identify fund and stock characteristics that are associated with restatements. We find that funds with larger portfolios, higher turnover, and greater capital flows exhibit significantly higher restatement propensity, as they possess superior information acquisition capacity and stronger incentives to minimize price impact. Restatements are persistent, but also respond to oversights from both the regulator and the investor, as funds experiencing more frequent confidential treatment denials or filing downloads subsequently reduce restatements. In terms of stock characteristics, we find that funds under-report their holdings of undervalued stocks and potential M&A targets. There is also evidence that initial misreporting is used to hide momentum-like trading strategies.

Finally, if strategic misreporting and the subsequent use of restatements create value, they should enhance fund performance. We capture this value by calculating the restatement return gap. For each fund at quarter-end, we construct two portfolios: an *original* portfolio based on holdings from the initial 13F filing, and a *true* portfolio that incorporates adjustments from the promptly-filed restatement. The return gap is defined as the difference in returns between these

two portfolios over the subsequent quarter.

Although the average return gap is positive but statistically insignificant, positive gaps are found to predict future fund performance. This is consistent with the interpretation that they reflect managerial skill. Specifically, hedge fund companies with positive return gaps at the start of a quarter go on to outperform those with negative gaps by approximately 0.4% per month in the following quarter, even after risk adjustment. This predictive power persists after controlling for an array of fund and stock characteristics. Moreover, investors respond rationally to a positive gap: they monitor the fund's future restatements more closely and allocate more capital to it. Collectively, these findings indicate that the value derived from strategic misreporting is both economically significant and recognized by sophisticated investors.

Our study makes several contributions to various branches of literature. First, in the theoretical literature of disclosure, previous studies have demonstrated that corporations and investors strategically disclose information considering the costs of sharing proprietary information with competitors and the benefits of informing potential investors in the market (e.g., Verrecchia, 1983; Vives, 1984; Diamond and Verrecchia, 1991; Fishman and Hagerty, 1989, 2003; Admati and Pfleiderer, 2000).[6]. Institutional investors, in particular, face the costs of front-running and copycatting when disclosing their portfolio holdings due to the ease of replicating their trading strategies (e.g., Frank et al., 2004; Verbeek and Wang, 2013; Phillips et al., 2018; Agarwal et al., 2015; Shi, 2017; Cao et al., 2021). Hedge funds have leveraged the SEC's 13F confidential treatment to conceal their informative trades (e.g., AJTY; Aragon et al., 2013). Our paper contributes by offering systematic evidence on 13F restatements and their strategic use by hedge fund companies. We compile a comprehensive database of 13F restatements and demonstrate that, despite being intended to

[6]See also the surveys Verrecchia (2001), Leuz and Wysocki (2016), and Goldstein and Yang (2017) for more complete descriptions of this literature.

correct honest disclosure mistakes, hedge fund companies frequently utilize restatements to delay the disclosure of private information to the market. We believe that our paper underestimates the true extent of strategic misreporting by hedge fund companies, as there is no guarantee that misreporting will always be corrected through a future restatement.

Our study also aligns with research on fraudulent and manipulative behaviour among institutions, including consequences of financial misrepresentation (Karpoff et al., 2008a,b), misreporting in securitized loans (Griffin and Maturana, 2016), return smoothing and misreporting by hedge funds (Bollen and Pool, 2008, 2012), and prediction of investment fraud (Dimmock and Gerken, 2012).[7] We contribute to this line of research by examining another dimension of institutional misreporting and strategic behaviour through the analysis of hedge fund companies' use of 13F restatements.

Finally, our study contributes to the extensive literature on identifying skills from institutional investors' holdings. Prior studies have explored this topic in the context of mutual funds (e.g., Daniel et al., 1997; Wermers, 2000; Kacperczyk et al., 2005, 2008; Cremers and Petajisto, 2009) and hedge funds (e.g., Griffin and Xu, 2009; Aragon and Martin, 2012; AJTY; Aragon et al., 2013). In our paper, we introduce a new skill measure, the restatement return gap, which captures the information difference between a hedge fund company and the market. We demonstrate that this measure has predictive power for future hedge fund returns.

[7]For a more complete discussion of the literature, we refer the reader to survey papers by Amiram et al. (2018) and Griffin (2021).

2 Institutional Background and Data

2.1 Institutional background

According to Section 13(f) of the 1934 Securities Exchange Act, institutional investment managers, including foreign investors, who have investment discretion over $100 million or more in Section 13(f) securities (primarily publicly traded equity, but also convertible bonds and options) are obligated to disclose their quarter-end holdings in these securities. The same rule also requires institutional investment managers to file amendments to their Form 13F filings. For instance, if a request for confidential treatment is denied or the grant of confidential treatment expires, institutional investment managers must submit amendments within six business days of the denial or expiration. The economic implications of such amendments have been extensively examined in previous literature (e.g., AJTY; Aragon et al., 2013).[8]

Amendments may also be filed for reasons unrelated to confidential treatment. In particular, if filers identify any errors in previously filed Form 13F reports, they are required to amend their filings promptly. Errors could arise if the original filing contained incorrect information, such as misstated share numbers or fair market values. In such cases, filers must resubmit their entire filing, incorporating the necessary corrections, to supersede the original filing with the amended version. Alternatively, if certain reportable securities were not included in the original Form 13F filing, an amendment should be filed specifically listing the additional securities. This type of amendment serves as a supplement to the original filing rather than replacing it entirely.[9]

Appendix A provides an example of the 13F Amendment header. On the cover page, investment

[8] If an amendment is filed because of confidential treatment, then the following legend should be included at the top of the Form 13F Cover Page: THIS FILING LISTS SECURITIES HOLDINGS REPORTED ON THE FORM 13F FILED ON (DATE) PURSUANT TO A REQUEST FOR CONFIDENTIAL TREATMENT AND FOR WHICH (THE REQUEST WAS DENIED/CONFIDENTIAL TREATMENT EXPIRED) ON (DATE).

[9] The detailed SEC guidance for filing amendments is available at https://www.sec.gov/divisions/investment/13ffaq.htm.

managers specify the original calendar quarter to which the amendment pertains. To indicate the type of amendment, the investment manager selects one of two checkboxes: (1) "is a restatement," or (2) "adds new holdings entries."[10]

2.2 Data sources and sample construction

We analyze 13F filings submitted by hedge fund companies between 1999 and 2018.[11] We focus our analysis on hedge funds for two reasons. First, prior research consistently identifies them as informative market participants, with demonstrated ability to generate and act on valuable private information (e.g., Brunnermeier and Nagel, 2004; Griffin and Xu, 2009). Second, the economic structure of hedge funds creates uniquely strong incentives to misreport holdings strategically: their performance-based compensation, concentrated portfolios, and active trading strategies all increase the value of hiding position changes from competitors. We manually classify hedge fund companies using multiple sources, including company websites, Form ADV filings, industry directories and publications, and news articles, following AJTY.[12]

Our primary dataset comprises the original 13F filings and their subsequent amendments. We collect both original filings (Forms 13F-HR) and amendments (Forms 13F-HR/A) submitted between March 1999 and June 2018 from the SEC's EDGAR database.[13] An automated program initially processes the holdings data, which we then manually verify for accuracy. The final sample includes 60,007 original filings and 4,094 amendments, 2,043 restatements and 2,051 confidential

[10] In this study, we exclude 21 amendments in which the investment company checks neither box, as those cases can be ambiguous.

[11] Our sample begins in 1999 when electronic 13F filings first became available on SEC EDGAR. Although investment companies file 13F filings, we use "hedge fund" interchangeably with "hedge fund company" throughout the paper.

[12] We thank the authors of Cao et al. (2021) for sharing their hedge fund classification data.

[13] The SEC 13F holdings data are also available in the WRDS SEC Analytics Suite. However, the data are complete only after June 2013 on WRDS.

filings, submitted by 1,550 hedge fund companies.[14]

Figure 1 illustrates the time-series trends in restatements and confidential filings. Both types of amendments are similarly prevalent and distributed evenly over time.

[Insert Figure 1 Here]

Table 1 presents summary statistics. Panel A shows the distribution of the filing delay (in quarters) between the quarter-end portfolio date and the 13F amendment filing date. Approximately 95% of confidential filings occur more than one quarter after the quarter-end, whereas half of the restatements are filed in the immediately following quarter. In Panel B, we present the distribution of amendment filing frequency among hedge funds. Only 40% of funds submit at least one restatement, and just 5% file at least one confidential amendment. This disparity is expected: while confidential filings are typically strategic, restatements may correct honest errors or reflect strategic misreporting. Notably, seven hedge fund companies filed more than 20 restatements during our sample period. Excluding these frequent filers does not affect our results.

[Insert Table 1 Here]

In Panel C, we report the average number of stock holdings per filing type. Original filings contain 162 holdings on average, while restatements include 72 holdings and confidential filings just 24 holdings.

In our analysis, we classify restated holdings by the trading motivation behind their initial misreporting in original filings. *Acquisition-motivated* restated holdings represent positions where funds

[14]Starting in 2013, investment companies can report background information or reasons for filing restatement using the "additionalInformation" field in the 13F form. We parsed this field for all 13F filings and found only 90 restatements in our sample with such background information. Reasons provided include "printer formatting error," "clerical error," "wrong file was uploaded," and "data lost." Our main results remain qualitatively unchanged after excluding these 90 restatements. We thank Tanja Kirmse for bringing this field to our attention.

initially underreported to obscure their share accumulations. Conversely, *disposition-motivated* restated holdings reflect positions where funds misreported to hide sell-off activity.

Our classification methodology proceeds as follows. For each restated holding, we compare the hedge fund's *true* (restated) stock-split-adjusted position in quarter t against the true position in quarter $t-1$. We classify net increases as acquisition-motivated and net decreases as disposition-motivated. For positions with no change, we apply the Lee and Ready (1991) method by examining subsequent changes in quarter $t+1$ relative to quarter t. This approach allows us to reliably distinguish between acquisition- and disposition-motivated misreporting, even when quarterly snapshots alone do not fully reveal trading intent.

Panel C results reveal that acquisition-motivated holdings outnumber disposition-motivated holdings. The sample of 2,043 restatements shows an average of 43 acquisition-motivated holdings per filing, compared to 29 disposition-motivated holdings. The asymmetric pattern suggests that funds more frequently hide accumulation activities than sell-offs.

In addition to the trading motive, we also classify restated holdings into four types by comparing the number of shares reported in restatements with those in original filings. If the same stock holding appears in both the original filing and the restatement, we classify it as a *revision up* if the restatement reports more shares, or a *revision down* if it reports fewer. If the stock appears only in the restatement, we classify it as a *new* holding; if it appears only in the original filing, we classify it as a *complete revision down* holding. We observe more revision-ups and new holdings in an average restatement.

3 Strategic Misreporting in 13F Filings

While the SEC permits 13F restatements to correct "honest" errors, the limited regulatory oversight (discussed in Section 1) creates opportunities for hedge funds to misreport positions in original filings strategically. Restatements provide us an opportunity to examine these practices by comparing amended disclosures with original filings, revealing cases where initial "errors" likely represented intentional withholding of private information rather than genuine mistakes. This section analyzes the abnormal returns of restated holdings to empirically test for evidence of such strategic misreporting in the original 13F filing.

3.1 Sample Restatements

Given hedge funds' incentives to withhold private information (e.g., AJTY; Cao et al., 2021; Shi, 2017), restatements' true intentions are unobservable. To distinguish between strategic and honest use, we apply multiple filters to our sample of 2,043 restatements. First, we exclude 337 restatements filed within five days of original filings, as their proximity suggests error corrections rather than strategic behaviour.[15]

Next, we manually review the remaining 1,706 restatements and exclude 264 technical restatements addressing apparent filing errors. These include cases where hedge funds: (1) interchanged "number of shares" and "market value" data, (2) used inconsistent share units between filings, (3) truncated share quantities, or (4) reported different numbers of contributing investment managers.

The final sample of 1,442 restatements, whose underlying motivations cannot be definitively determined, forms the basis for our subsequent analyses.

[15]Our analysis results remain robust when we vary the restatement filing delay between two and five days.

3.2 Abnormal Returns of Restated Holdings

To investigate whether 13F restatements reveal hedge fund companies' strategic misreporting in original 13F filings, we analyze abnormal returns of restated holdings during the restatement period, from the end of quarter t to the restatement filing date. This period represents a window during which the correct positions of restated holdings remain undisclosed. If misreporting reflected honest errors, restated holdings should show no abnormal returns; significant abnormal returns would instead suggest intentional withholding of private information.[16]

As Figure 2 shows, we divide the restatement period into two subperiods using the original 13F filing date. The first subperiod encompasses the period when all holdings remain undisclosed. During the second subperiod, while positions not subject to subsequent restatement are accurately reported, those holdings that will later be restated remain misreported in the public disclosure.

[Insert Figure 2 Here]

Figure 2 further illustrates a plausible strategic timeline consistent with hedge fund behaviour. In this scenario, a hedge fund manager who obtains private information during quarter t may initiate trading immediately while strategically managing price impact through gradual execution. If position adjustment continues beyond the original filing deadline, the fund has an incentive to misreport positions initially. The subsequent restatement may then be filed after either the public release of the private information (through earnings announcements or other disclosures) or the completion of the target position adjustment.

This framework yields two empirical predictions. First, if hedge funds strategically misreport

[16] It is also possible that hedge funds may routinely add random noise to their originally reported holdings. They correct such noises with subsequent restatements to discourage front-running or copycat trading (Huddart et al., 2001). Such regular misreporting and restatement behaviour run the risk of drawing the SEC's attention. More importantly, as long as the "noise" is random, the restated holding should not be associated with an abnormal return.

holdings in original filings, restated positions should generate abnormal returns during the restatement period, especially the second subperiod when only restated holdings remain misreported while other positions are accurately disclosed. Second, we expect public information events associated with restated holdings to occur more frequently during this second subperiod, when the true positions remain undisclosed.

3.2.1 Comparing Return Performance of Restated and Original Holdings

We analyze restated holdings by constructing portfolios from all positions disclosed in restatement filings. We use two measures to evaluate the restated holdings' performance during the restatement period. For our primary measure, we estimate daily abnormal returns for restatement portfolios using the Carhart (1997) four-factor model. Assuming positions remain unchanged from the previous quarter-end through the restatement filing date, we first compute daily portfolio returns as value-weighted averages of constituent stocks' returns, using the market values of restated positions (as reported in the restatement filings) as weights. These portfolio returns are then regressed on the Carhart (1997) four factors to derive daily abnormal returns for each restatement portfolio during the restatement period.

Our secondary measure uses the Daniel et al. (1997, "DGTW" hereafter) characteristic-adjusted approach. Every June, we form 125 benchmark portfolios from NYSE/AMEX/NASDAQ common shares, sorted by size (NYSE quintiles), book-to-market ratio, and momentum. The daily abnormal return of a given stock is its excess return over that of the benchmark portfolio to which it belongs. We then compute value-weighted DGTW-adjusted portfolio returns across all restated holdings.

We assess the performance of restatement portfolios by comparing their abnormal returns during the restatement periods to those of original portfolios of the same institution during the same periods. To ensure a clean comparison, in the original portfolios, we only include positions that are

not subsequently restated in the restatement.

Panel A of Table 2 reports the return performance of both original and restatement portfolios, along with their differences. The Carhart (1997) four-factor alphas reveal economically and statistically significant evidence of greater abnormal returns for restated holdings during the restatement window. This effect is particularly pronounced in the second subperiod, where the daily alpha difference between restatement and original portfolios reaches 13.753 basis points (bps), which is statistically significant at the 1% level. While the DGTW benchmark-adjusted return difference is more modest at 0.937 bps during the second subperiod, it remains statistically significant at the 10% level.

[Insert Table 2 Here]

Having established the presence of significant abnormal returns in restatement portfolios, we now examine how these returns vary across key dimensions by conducting cross-sectional analyses.

3.2.2 Length of Restatement Period

Our cross-sectional analysis first examines how the length of the restatement period relates to strategic misreporting. When hedge funds obtain private information before quarter-end but cannot complete position adjustments by the original filing deadline, they have strong incentives to misreport positions in their initial 13F filings. This practice preserves the information's proprietary value during ongoing trading. However, since disclosure regulations require prompt release of material information, this advantage is inherently short-lived. As a result, restatements filed shortly after original filings most likely correct intentional misreporting, typically occurring either after funds have completed their position adjustments or when private information becomes public. This timing pattern predicts stronger abnormal returns for restated holdings from prompt

corrections.

Our results support this prediction. As shown in Panel A of Table 2, we categorize restatements into four groups based on their restatement period length: *immediate* (filed in quarter t+1, denoted **Q1**), *near-term* (quarter t+2, **Q2**), *intermediate* (quarters t+3 and t+4, **Q3-Q4**), and *long-delayed* (filed beyond one year, **Q4+**). The results demonstrate a clear pattern: immediate restatements exhibit the largest daily four-factor alpha difference of 31.624 bps relative to the original portfolios, followed by a smaller but still significant 4.804 bps difference for near-term restatements. Both intermediate and long-delayed restatements show statistically insignificant differences. This decline in abnormal returns, which persists when using DGTW-adjusted measures, strongly suggests that restatements with shorter restatement periods reflect strategic misreporting in original filings.

3.2.3 Acquisition- and Disposition-Motivated Misreporting

Our second cross-sectional analysis investigates how trading motives influence misreporting behaviour. Hedge funds may strategically misreport positions in original filings to hide either share accumulation or reduction activities. When driven by private information, these motives reflect fundamentally different signals: acquisitions typically indicate positive private information about undervalued stocks, while dispositions suggest negative information about overvalued positions. This distinction predicts differences in the performance of restated holdings during the restatement period.

In Panel B of Table 2, we find that acquisition-motivated restated holdings generate significantly positive abnormal returns relative to original holdings throughout the restatement window. The daily four-factor alpha difference measures 2.243 bps for the full period and rises to 13.491 bps in the second subperiod. In contrast, disposition-motivated restated holdings show no statistically significant underperformance in any period. This null result is consistent with several non-mutually

exclusive explanations. First, hedge funds may have weaker incentives to hide negative information than to protect positive private information. Second, non-informational motives, such as liquidity-driven selling, may dilute negative return effects. Third, and critically, Form 13F's exclusive focus on long positions provides an incomplete picture: funds may simultaneously hold short positions in the same securities they are reporting long sales. Our performance calculation, based solely on reported long positions, would not capture the net economic effect of such offsetting short exposure, potentially obscuring the true informational motive behind the disposition.

To better identify information-driven misreporting, we analyze the consistency of signals between original filings and restatements. For each restated holding, trading direction can be inferred twice: (1) from the original filing (comparing quarter t to $t-1$ positions) and (2) from the restatement (comparing restated quarter t to $t-1$ positions). Contradictions in inferred trading directions (e.g., acquisition in restatement versus disposition in original filing) strongly indicate intentional information withholding. The results show particularly compelling evidence for acquisition cases. During the second subperiod, holdings with contradictory signals exhibit a 17.336 bps premium over original holdings, while even consistent signals show significant 10.701 bps outperformance. The 10.931 bps difference between these groups confirms that returns are strongest when original filings substantially misrepresent acquisition activity.

For disposition-motivated cases, we again find insignificant results. While surprising dispositions show modest negative returns (-0.045 bps versus original holdings; -2.372 bps versus unsurprising dispositions), neither difference approaches statistical significance. This persistent pattern across multiple tests confirms that disposition-related misreporting likely stems from diverse motivations beyond private information protection.

3.2.4 Restated Holdings Type

We further analyze abnormal returns by categorizing restated holdings into four types based on the differences in the reported number of shares between the original filings and the restatements.[17] Although this classification does not perfectly capture actual trading activity, it provides insight into the direction of position adjustments during the restatement period, particularly in the second subperiod. If these patterns reflect informed trading, we expect: (1) positive abnormal returns for revision-up and new holdings, which indicates secret accumulation of undervalued stocks; and (2) negative abnormal returns for revision-down and complete revision-down holdings, which suggests hidden reductions of overvalued positions.

The results, reported in Panel C of Table 2, support these predictions. Using daily four-factor alphas, we find that both revision-up and new holdings generate significantly higher abnormal returns than their original counterparts during the second subperiod. The premium reaches 17.706 bps for revision-up holdings and 9.762 bps for new holdings, with both statistically significant at the 5% level or higher. Conversely, revision-down and complete revision-down holdings exhibit significant negative premiums of -2.460 bps and -13.815 bps, respectively. Although somewhat attenuated, these patterns remain consistent when using DGTW benchmark-adjusted returns.

[17] It is important to distinguish our classification of trading motives in the last section from the share quantity comparison between original and restated filings for the same quarter in the current section. While these two methods are often correlated, they are conceptually distinct. For example, consider a fund that held 100 shares of a stock in quarter t–1. If the original filing for quarter t reports 150 shares and the subsequent restatement corrects this to 120 shares, this holding would be classified as a revision-down based on the quarter t filing discrepancy. However, when comparing the true quarter t position (120 shares) to the true quarter t–1 position (100 shares), the fund has a net increase of 20 shares. Therefore, we would classify this as acquisition-motivated. This illustrates that a restatement correcting a previous overstatement does not necessarily imply disposition; it can occur alongside net accumulation.

3.2.5 Activist Hedge Funds

Our final cross-sectional analysis examines whether restated holdings from activist hedge funds outperform those from non-activist funds. We classify a fund as *activist* if it filed at least one Schedule 13D during the year ending with the current quarter. The SEC mandates Schedule 13D filings when investors *acquire* more than 5% ownership in a public company, making it a reliable proxy for active investment strategies. Since activist funds are more likely to possess and trade on material non-public information, we hypothesize that their restated holdings will exhibit significantly higher abnormal returns during the restatement period compared to those of non-activist funds. This effect should be especially pronounced for acquisition-motivated restated holdings, as activists have greater incentives to hide their share accumulation.

The empirical results presented in Panel D of Table 2 reveal consistent patterns of strategic misreporting among activist funds. In cross-fund comparisons, restated holdings from activist funds generate significantly higher abnormal returns than those from non-activist peers, with a four-factor alpha premium of 5.215 bps during the full restatement period. The activist premium increases slightly to 5.371 bps for acquisition-motivated cases. Within-fund comparisons yield equally compelling evidence: activist funds exhibit both greater magnitude and more persistent return differences between their restated and original holdings. For instance, during the second subperiod, the within-fund premium reaches 16.122 bps for activist funds compared to 13.207 bps for non-activist funds. Notably, the activist fund results maintain statistical significance across all tested periods, whereas non-activist results show only sporadic significance.

4 Motivations for Restatement Filings

Our analysis shows that restated holdings generate significant abnormal returns during the restatement period, suggesting that hedge funds strategically misreported these positions in their original filings to conceal their trading strategies. This finding raises a critical question: why would funds voluntarily correct their misreporting through restatements, given the SEC's limited oversight of 13F filings?

We explore two non-mutually exclusive explanations for this behaviour. First, restatements may occur when previously private information becomes public. Once the information loses its proprietary value, funds have little incentive to sustain misreporting. Second, funds may issue restatements to induce copycat trading, particularly after completing position accumulation. In such cases, attracting additional buying pressure could accelerate price convergence toward fundamental values. This section empirically tests both explanations.

4.1 Public Disclosure in Restatement Period

We begin by testing whether hedge funds file restatements following public information disclosures. Our analysis focuses on material corporate events reported in 8-K filings during the restatement period, particularly the second subperiod when positions of later-restated holdings remain misreported. Following prior research (e.g., Rubin et al., 2017; Lerman and Livnat, 2010), we use 8-K reports as a proxy for material corporate events. These filings are well-suited for this purpose because they formally announce material developments and have been shown to influence valuations through abnormal trading volume and returns.

We distinguish between two types of 8-K reports: anticipated and unanticipated. Anticipated reports consist exclusively of Item 2.02 disclosures (e.g., earnings results), which market partici-

pants can predict due to pre-announced reporting dates. All other 8-K reports are classified as unanticipated, as they reflect unexpected corporate developments. Although this approach may underestimate total information effects by excluding external news sources, it offers a conservative measure consistent with prior studies.

To assess information intensity, we count all unanticipated 8-K filings issued during the restatement period for each holding. We then compute the average number of such filings across all holdings in both the restatement portfolios and their original portfolio counterparts. This calculation is performed for the full restatement period as well as for each subperiod. Our final comparison tests whether restatement portfolios experience significantly more unanticipated 8-K disclosures than their original portfolio peers during these periods. Table 3 presents the full results of these analyses.

[Insert Table 3 Here]

Our analysis uncovers nuanced patterns in information intensity. Contrary to initial expectations, we find no systematic difference in unanticipated 8-K disclosure between restatement portfolios and original portfolios during either the full restatement period or the second subperiod. The only exception occurs in the first subperiod, where restated holdings demonstrate marginally yet significantly higher information intensity (difference = 0.058) compared to their original counterparts. This modest effect size implies that public information disclosure accounts for only a small portion of restatement filings.

4.1.1 Length of Restatement Period

The combination of weak full-sample information intensity results and our earlier finding of elevated abnormal returns for promptly filed restatements suggests an intriguing possibility: public

disclosure is particularly relevant for misreported positions that hedge funds correct soon after the original filing.

To examine this possibility, we perform a refined analysis by classifying restatements into four groups based on their restatement period length, mirroring the classification in Panel A of Table 2: *immediate*, *near-term*, *intermediate*, and *long-delayed*. This approach allows us to test whether the importance of the information disclosure channel varies with the length of the restatement period. Specifically, we examine whether restated holdings from immediate and near-term restatements exhibit greater exposure to unanticipated 8-K disclosure than their original counterparts.

We find supporting evidence from Panel A of Table 3. Restated holdings from immediate and near-term restatements show significantly higher unanticipated 8-K activity than their original counterparts across all restatement periods. This effect is particularly pronounced in the second subperiod, where the information intensity differential reaches 0.037 for immediate restatements and 0.379 for near-term restatements. Both are statistically significant at 10% level or higher. The pattern reverses for long-delayed restatements, where restated holdings experience significantly fewer information events than original holdings in the second subperiod (difference = -1.010). This contrast suggests that the public information channel is more relevant for quickly restated positions that are likely reflecting strategic misreporting in the original filing.

4.1.2 Trading Motivation and News Nature

Building on our analysis of information intensity, we next investigate whether the content of 8-K disclosures differs between acquisition-motivated and disposition-motivated restated holdings. Suppose hedge funds' initial misreporting is indeed driven by private information. In that case, we expect that acquisition-motivated restated holdings should be associated with more positive 8-K disclosures following the original filing. Similarly, disposition-motivated restated holdings are

expected to be correlated with more negative 8-K disclosures during the same period.

We implement this analysis by first categorizing each restated holding as either acquisition-motivated or disposition-motivated, following the classification scheme presented in Panel B of 2. For every restated holding, we examine all 8-K filings filed during its restatement window, excluding those within three-day windows surrounding either the restatement filing date or earnings announcements to isolate clean information effects. We then classify each remaining 8-K disclosure as positive or negative based on three-day cumulative abnormal returns (CARs), computed using the Carhart (1997) four-factor model with parameters estimated over a 210-day estimation window ending 90 days before each 8-K filing date.

Panel B results demonstrate a clear contrast in disclosure content between acquisition- and disposition-motivated restated holdings during the second subperiod. Specifically, the former exhibit significantly more positive than negative 8-K disclosures, whereas their original counterparts exhibit the inverse pattern, with predominantly negative news. This divergence explains the observed outperformance of acquisition-motivated restated holdings, as their positive news exposure contrasts with the negative news burdening their original portfolio counterparts. The disposition-motivated sample reveals a more complex dynamic: while restated holdings show the predicted predominance of negative disclosures, their original holdings face similarly unfavourable news environments. This symmetrical exposure to negative information accounts for our earlier null finding regarding underperformance: when both restated and original positions face comparable adverse disclosures, their relative performance differences become statistically indistinguishable.

4.2 Market Reaction to Restatement Filing

We now investigate whether hedge funds file restatements to induce copycat trading and accelerate price convergence. Under this hypothesis, funds use restatements to draw attention to previously

misreported positions, thereby encouraging other investors to trade in the same direction. We test this prediction by analyzing market reactions to restatement filings, where positive (negative) abnormal returns would suggest copycat buying (selling) activity.

To measure market reactions, we estimate daily abnormal returns for each restated holding using the Carhart (1997) four-factor model, with parameters estimated over a 210-day window ending 90 days before each restatement filing date. For each restatement filing, we then compute the equal-weighted average abnormal return across all associated holdings. These daily averages are aggregated into cumulative abnormal returns (CARs) over three event windows: [-1, +1], [-3, +3], and [-5, +5] relative to the restatement filing date (day 0).

[Insert Table 4 Here]

Table 4 reveals three key findings regarding market reactions to restatement filings. First, across all restatements, we find strong positive market reactions. The average CARs are 0.410% for the three-day window [-1, +1], with similar magnitudes of 0.411% over window [-3, +3] and 0.574% over window [-5, +5]. All three are statistically significant at the 1% level. Second, we consistently find strong positive reactions to acquisition-motivated restated holdings. The three-day window [-1, +1] shows a 0.445% abnormal return, while the windows [-3, +3] and [-5, +5] yield 0.444% and 0.565% respectively. Each of these reactions is statistically significant at the 1% level, indicating substantial copycat buying activity when funds correct previously underreported acquisitions. In contrast, the market reaction to disposition-motivated restatement is limited. While the [-1, +1] and [-3, +3] windows show modest negative returns of -0.160% and -0.349%, respectively, neither is statistically significant.

The muted market reaction to disposition-motivated restatements is not surprising, as these likely reflect mixed motives - both informational (e.g., concealing negative news) and operational

(e.g., liquidity management). Furthermore, since hedge funds typically maintain partial positions after disclosing selloffs through restatements, they have clear incentives to avoid corrections that might prompt substantial selling pressure and impair their remaining holdings. This strategic approach explains our findings: funds appear to selectively disclose disposition-related restated holdings only when disclosure risks are minimal. Such selectivity yields the observed statistically insignificant negative returns, demonstrating how restatements balance regulatory compliance with portfolio value protection.[18]

5 Determinants of 13F Restatements and Restated Holdings

While our analysis has demonstrated that hedge funds strategically misreport holdings and identified their motives for filing restatements despite limited regulatory oversight, we now examine the factors driving these decisions at two levels: (1) hedge fund characteristics that predict restatement likelihood, and (2) stock-level attributes that make certain holdings prone to restatements.

5.1 Hedge Fund Characteristics and Propensity of 13F Restatement: A Fund-Level Analysis

The incidence of 13F restatements should vary systematically based on their underlying purpose. Restatements correcting genuine filing errors would likely occur randomly across hedge funds, showing no association with fund characteristics. In contrast, restatements reversing strategic misreporting should correlate predictably with specific fund attributes. We leverage this distinction to test

[18]To assess whether the documented market reactions reflect the Form 13F restatements themselves rather than contemporaneous material disclosures, we examine the timing of Form 8-K filings relative to 13F restatements and re-estimate cumulative abnormal returns after excluding restated holdings associated with Form 8-K filings occurring within one week prior to the restatement date. We thank the referee for suggesting this analysis. Both the distribution of the timing gaps between Form 8-K and Form 13F restatement filings and the corresponding event-study results are reported in the Internet Appendix. The results remain qualitatively unchanged.

for evidence of strategic misreporting by examining whether restatement likelihood systematically relates to fund characteristics.

Following AJTY, we examine several fund characteristics that capture active portfolio management and market impact. The variable *Age* represents the number of years since the fund first appeared in Thomson Reuters data. *PortSize* measures the total market value of quarter-end holdings. *Turnover* is computed as the lesser of quarterly purchases or sales divided by the average portfolio size across two consecutive quarters. Portfolio concentration is quantified through the Herfindahl index *PortHHI* based on position market values. Performance metrics include *PortRet* for average monthly returns during the quarter and *PortVol* for idiosyncratic volatility over the past 36 months. Absolute fund flows, denoted as $|Flow|$, reflect net portfolio value changes excluding return effects, scaled by the prior quarter's portfolio size.

To assess strategic behaviour, we incorporate *Activism* measured by the number of Schedule 13D filed during the previous twelve months, along with the number of restatements and confidential filings filed previously by the same fund (i.e., *Prior_Rest* and *Prior_Conf*). We include a pair of variables to assess whether the attention of outside investors and regulators affects a fund's decision to submit a restatement. *Prior_ConfDeny* counts the number of confidential filings that were filed because the SEC denied the funds' application for confidential treatment. *13F_DL* counts the number of previously filed 13F reports downloaded from the SEC EDGAR database. Given that the EDGAR Download data is only available through 2017 Q2, we estimate two distinct probit model specifications - one excluding this variable for the full sample and another including it for the pre-2017 subsample.

[Insert Table 5 Here]

Table 5 presents estimates from multivariate probit regressions in fund-quarter panels incorpo-

rating calendar quarter fixed effects and hedge fund-clustered standard errors. Column (1) reveals that funds with larger portfolios, higher turnover, and greater capital flows exhibit significantly higher restatement propensity. These results align well with theoretical predictions: larger funds' superior information acquisition capacity and active traders' need to minimize price impact create stronger incentives for strategic misreporting. The flow-restatement relationship further suggests that performance pressures lead funds to initially hide positions before subsequent restatements. We further document persistence in amendment behaviour, as funds filing restatements are more likely to file again in the future. The analysis also demonstrates meaningful regulatory influence, as funds that face more frequent confidential treatment denials exhibit reduced likelihood of restatement. This deterrent effect, though indirect, indicates that regulatory oversight could affect funds' disclosure strategies, potentially shaping both initial misreporting and subsequent corrections decisions.

Column (2) introduces investor attention (*13F_DL*) as an additional control, yielding two key insights. First, similar to regulatory scrutiny, greater investor attention to previously filed 13F reports is associated with significantly lower restatement likelihood. The parallel deterrent effects of both regulatory and investor scrutiny underscore how external monitoring influences funds' disclosure decisions. Second, activist funds show significantly higher restatement propensity than peers, consistent with their distinctive informational advantages and strategic objectives in position reporting.

We also note that in both specifications fund age is not significantly associated with the likelihood of restatement filing, which works against the alternative hypothesis that the restatements are driven by the inexperience of fund staff and their potential innocuous errors.

5.2 Characteristics of Restated Holdings: A Stock-Level Analysis

Having established which funds are most likely to file restatements, we now examine whether certain stock characteristics predict inclusion in amended positions. This analysis will reveal whether hedge funds systematically target particular types of securities when engaging in strategic misreporting and subsequent correction.

We consider the following stock attributes in the analysis. *StockSize* measures quarter-end market capitalization, and *BM* denotes the book-to-market ratio. We control for return momentum using *AdjRet*, defined as the twelve-month cumulative returns preceding quarter-end. For liquidity measurement, we construct a modified Amihud (2002) illiquidity measure, *Illiquidity*, which is calculated as the yearly average of the square root of $|Return|/(Price \times Volume)$. The information environment is captured by *NAnalyst*, defined as the number of analysts who issued at least one forecast or recommendation in I/B/E/S for the firm during the past twelve months. To assess financial distress, we estimate each firm's distance to default annually following Vassalou and Xing (2004). Then, we create an indicator *D_DtD* that equals one when *DtD* falls below 1.64. *StockVol* measures idiosyncratic return volatility over the prior 36 months. Finally, *MA_Target* and *Activism_Target* identify stocks involved in M&A deals or activist campaigns, respectively, during the past twelve months.

In the regression, we also include calendar-quarter fixed effects and Fama and French (1997) industry fixed effects, with standard errors clustered at the hedge-fund level.[19] Table 6 presents the multivariate probit regression results using the full sample of stock holdings from both original 13F filings and restatements.

[19] When we re-estimate the stock-level regressions with institution × quarter fixed effects, which absorb all time-varying institution characteristics, the results remain qualitatively unchanged. We thank the referee for suggesting this analysis. Details are provided in the Internet Appendix.

[Insert Table 6 Here]

Column (1) examines the determinants of restated holdings using *D_Rest* as the dependent variable. The results reveal that stocks with higher book-to-market ratios have a significantly greater probability of appearing in restatements. This finding suggests that hedge funds are particularly likely to initially misreport positions in undervalued firms before subsequently correcting these positions through restatements.

The null results for most stock characteristics in Column (1) likely reflect offsetting effects across trading motivations. As hedge funds may misreport both acquisitions and dispositions, they potentially target stocks with opposing attributes: undervalued firms for accumulation and overvalued firms for sell-offs. This countervailing pattern in stock selection would attenuate the estimated coefficients in pooled regressions.

To investigate this possibility, Columns (2) and (3) examine acquisition- and disposition-motivated restated holdings separately using indicator variables *D_Rest_Acq* and *D_Rest_Dis*. The results reveal important differences: acquisition-motivated restated holdings are associated with stocks with significantly higher book-to-market ratios and a greater likelihood of being M&A targets than disposition-motivated positions. Moreover, we find that superior past performance predicts inclusion in acquisition-motivated restatements, while poorer performance predicts disposition-motivated corrections. These findings confirm that, when engaging in strategic misreporting, funds systematically select different types of stocks for each trading strategy.

6 Restatement Return Gap and Managerial Skill

The use of 13F restatements generates a material disparity between initially reported portfolios and funds' actual holdings. Investors must therefore incorporate subsequent restatement disclosures

to reconstruct the true portfolio accurately. We quantify the value of these corrections using the *restatement return gap*, the difference in returns between the true (restatement-adjusted) and originally reported portfolios.

This measure allows two important tests in this section: First, we test whether the superior performance of restated positions (positive return gaps) predicts future fund returns, potentially revealing managerial skill in position selection. Second, we examine how investors respond and incorporate this information by analyzing their information acquisition and capital allocation responses to observed return gaps.

6.1 Restatement Return Gap

The restatement return gap measures the incremental portfolio returns generated by differences between true and originally reported 13F portfolios, incorporating all restatements filed during the quarter immediately following the reference quarter-end.[20] This approach builds upon the conceptual framework of Kacperczyk et al. (2008), adapting their return gap methodology to capture valuation differences arising from 13F restatements rather than interim trading.

For each hedge fund in quarter t, we first compute monthly original portfolio returns using end-of-quarter $t-1$ holdings from the original 13F filings. We then compute monthly true portfolio returns by incorporating all restatements filed by the end of quarter t to adjust the reported holdings. The raw restatement return gap is the difference between these true and original portfolio returns. For greater economic interpretation, we also calculate a DGTW-adjusted version that accounts for characteristic-based benchmarks.

Table 7 presents descriptive statistics for both portfolio returns and their differences. By

[20] In addition to the restatement, hedge funds can also file confidential filings in the immediate quarter. However, as shown in Panel A of Table 1, most confidential filings are filed more than one quarter away from the quarter-end date. Our analysis results in this section still hold when we include confidential filings filed in the immediate quarter in the calculation of the return gap.

construction, the return gap equals zero for fund-quarters without restatements in the subsequent quarter. Both return gap measures show positive but statistically insignificant averages in the full sample. The modest unconditional means could reflect offsetting positive and negative gaps across funds. These aggregate results, therefore, may mask important cross-sectional variation that we examine in subsequent analyses.

[Insert Table 7 Here]

6.2 Hedge Fund Future Performance

The restatement return gap is a natural measure of managerial skill, given our evidence that hedge funds strategically misreport holdings to exploit private information. If this skill exhibits persistence, the return gap should predict future fund performance, providing investors with valuable signals for manager selection.

We test this predication through portfolio analysis using two performance measures: raw returns reported to commercial databases (e.g., Eurekahedge, HFR, and TASS) and eight-factor alphas following Fung and Hsieh (2001). To reconcile the company-level nature of 13F filings with fund-level returns, we compute aggregate company returns using both equal-weighted and value-weighted averages, where value weights reflect each fund's beginning-of-month assets under management (AUM).

At the beginning of each quarter, we sort hedge fund companies into two groups based on whether their average DGTW-adjusted monthly return gaps over the preceding three months in the last quarter are zero. We compare the average monthly reported returns between the non-zero and zero return gap groups in the current quarter. We find in Panel A of Table 8 that hedge fund companies that filed a restatement in the last quarter and, therefore, in the non-zero return gap

group report higher returns than those in the zero-gap group. The value-weighted monthly return difference is 0.191% (0.220% for factor-adjusted returns), both significant at the 5% level. The performance difference suggests restatements generally reflect fund managers' skilled trading.

Panel B provides a finer analysis by categorizing hedge fund companies into three groups based on the sign of their prior-quarter restatement return gap. We find that the positive return gap group significantly outperforms the negative gap group. The monthly value-weighted return difference reaches 0.499% for raw returns and 0.506% for factor-adjusted returns. The positive return gap group also significantly outperforms the zero gap group, i.e., those without a restatement filing. The returns of the negative gap group are lower than the zero gap group, although the difference is insignificant. Overall, the results show a positive return gap from restatements is indicative of superior future performance.

[Insert Table 8 Here]

To study the relationship between return gap signs and future performance while controlling for other confounding factors, we estimate the following multivariate regression model:

$$RepRet_{i,t} = \alpha + \beta_1 D\_PosGap_{i,q-1} + \beta_2 D\_NegGap_{i,q-1} + \sum \beta_k Control_{i,q-1} + \epsilon_{i,t}, \qquad (1)$$

where i represents hedge fund companies and t represents months within quarter q. The dependent variables are hedge fund companies' equal-weighted and value-weighted monthly reported returns in quarter q. D_PosGap and D_NegGap indicate whether the average DGTW-adjusted monthly return gap in quarter $q-1$ was positive or negative, respectively. Our control variables include all fund characteristics from Table 5 and stock attributes from Table 6, with stock-level measures value-weighted by position size. We further include two additional controls capturing operational

complexity: *Fund* (number of hedge funds per company) and *AUM* (total assets under management). Finally, we control for both calendar month and hedge fund company fixed effects in the regression.

Table 9 reports the result. While negative return gaps show no significant predictive power for subsequent performance, positive return gaps maintain a strong association with future returns even after controlling for an array of fund and stock attributes. This persistent predictive power of positive gaps suggests they specifically capture managerial skill rather than reflecting other observable characteristics. The results remain robust across both equal-weighted and value-weighted return specifications.

[Insert Table 9 Here]

6.3 Investors Response

Having established that positive restatement return gaps predict superior future performance, we now examine how investors respond to these informative signals. We evaluate investor attention and capital allocation decisions through two complementary measures: downloading activity of 13F filings from SEC EDGAR as a proxy for information acquisition, and subsequent fund flows as evidence of capital reallocation. This analysis tests whether market participants recognize and act upon the skill-revealing information embedded in restatement return gaps, thereby providing insight into the efficiency of investor response to 13F restatement.

At the beginning of each quarter, we calculate hedge fund companies' average DGTW-adjusted monthly return gaps in the last quarter and estimate the following regression model to assess

investor responses:

$$Response_{i,q} = \alpha + \beta_1 D\_PosGap_{i,q-1} + \beta_2 D\_NegGap_{i,q-1} + \sum \beta_k Control_{i,q-1} + \epsilon_{i,t}, \quad (2)$$

where i and q index funds and quarters, respectively. We include the same set of controls in Table 9. For our first response measure, we track 13F filing download activity by counting quarterly downloads of each fund company's previously filed 13F documents from SEC EDGAR. Recognizing that different filing types convey distinct information, we separately analyze download volumes for original filings, restatements, and confidential filings.

[Insert Table 10 Here]

Panel A of Table 10 reveals several important findings about investors' downloading activity. Restatements from the previous quarter attract significantly greater downloads regardless of their return gap sign, indicating strong investor interest in amended disclosures. Conversely, original filings experience reduced download activity when restatements are present, suggesting investors perceive them as less informative once restatements occur. Confidential filings show no significant response to return gaps, with coefficients for both positive and negative gaps (i.e., D_PosGap and D_NegGap) remaining statistically insignificant.

This pattern of selective attention demonstrates that investors distinguish among filing types, focusing their information acquisition on the most relevant disclosures. The concentrated download activity around restatements particularly underscores their informational value compared to other filing types.

Panel B examines investor capital allocation by analyzing quarterly fund flows. Unlike the uniform downloading response observed in Panel A, investors demonstrate more selective capital

allocation. They increase investments only in funds with positive return gaps from the previous quarter. This selective response aligns with our earlier finding that positive gaps signal managerial skill. Column (1) shows this pattern clearly: the coefficient on D_PosGap is 0.118 (significant at the 10% level), while D_NegGap's coefficient of 0.032 remains insignificant.

The flow-return gap relationship appears mediated by investor information acquisition. Column (2) confirms this by interacting the gap indicators with restatement download activity (i.e., $Log(DL\_Rest)$). The significantly positive coefficient on $D\_PosGap \times Log(DL\_Rest)$ indicates that capital flows to skilled managers increase with greater scrutiny of their restatements. Conversely, the negative coefficient on $D\_NegGap \times Log(DL\_Rest)$ suggests investors penalize poor performance after a thorough review.

7 Concluding Remarks

In conclusion, our study provides valuable insights into the nature and implications of restatement filings among hedge fund companies. We find that restatements are prevalent and impact a significant number of stocks, highlighting the importance of examining these filings alongside confidential filings. The abnormal returns associated with restated holdings suggest strategic misreporting of original holdings to conceal trading intentions. Furthermore, we introduce the restatement return gap as a measure to capture the value added from restatements. Our analysis demonstrates that this measure has predictive power, enabling the identification of hedge fund managers with skill in exploiting private information or generating alpha. Investors can leverage this information to enhance portfolio performance. Importantly, we highlight the limitations of widely-used databases such as Thomson Reuters in fully incorporating restatement information. While the overall discrepancy is small, it can be substantial for individual funds. Our findings underscore the need

for increased scrutiny of 13F filings by investors and regulators, as well as improvements in the accuracy and coverage of these filings.

In summary, our research contributes to a better understanding of the dynamics of restatement filings among hedge fund companies. We emphasize the value of restatement information, the potential for predicting future fund performance, and the importance of addressing the limitations in existing databases. By recognizing and utilizing the insights from restatement filings, investors and researchers can gain a deeper understanding of hedge fund strategies and improve their decision-making processes.

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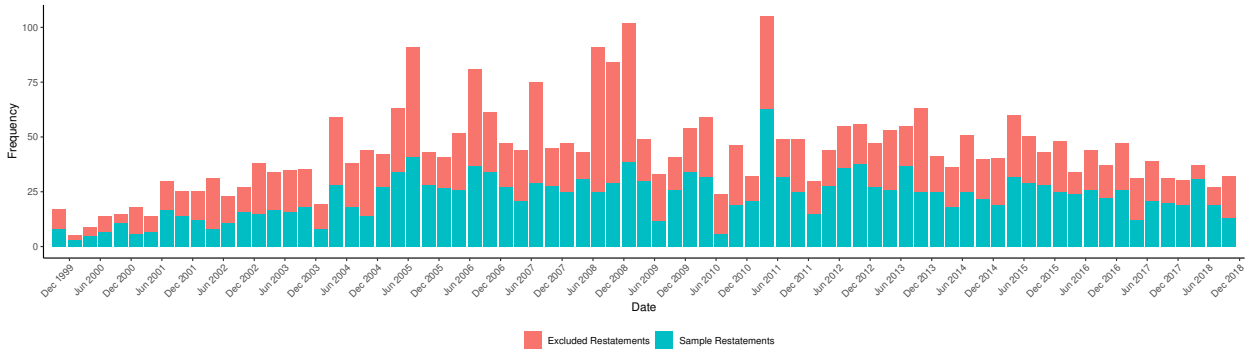
Figure 1: Time-Series Trend of Restatement and Confidential Filing

Panel A plots the number of *sample* (blue bars) and *excluded* restatements (orange bars) filed in each calendar quarter from 1999 to 2018. Panel B plots the number of *sample* restatements (blue line) and confidential filings (orange line) in each calendar quarter from 1999 to 2018.



Panel A: Time-Series Trend of Sample and Excluded Restatements Filing Frequency

Panel B: Time-Series Trend of Sample Restatements and Confidential Filings Filing Frequency

Figure 2: Restatement Period

This figure demonstrates the start and end dates of the restatement period. The restatement period extends from the current quarter-end to the 13F restatement filing date. We divide the restatement period into two sub-periods using the original 13F filing date.

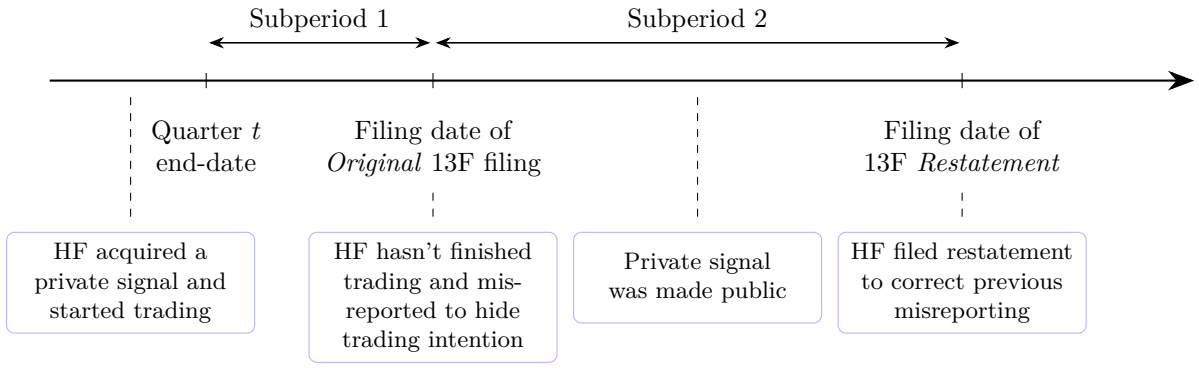


Table 1: Summary Statistics of 13F Original and Amendment Filings

Panel A reports the distribution of filing delays (in quarters) between quarter-end dates and filing dates for hedge fund companies' 13F restatements and confidential filings. Panel B presents the distribution of 13F amendment filing frequency per hedge fund company. Panel C provides summary statistics for the number of stock holdings in original 13F filings, restatements, and confidential filings. We further categorize restated holdings based on their trading direction and types. For each restated holding, we determine its trading direction by comparing the restated position (adjusted for stock splits) at the current quarter-end (t) with the institution's position in the same stock at the previous quarter-end ($t-1$). We classify a net increase (decrease) as an acquisition (disposition). If there is no change in position, we resolve the tie by examining the position change in the subsequent quarter ($t+1$) relative to the current quarter (t). To determine the restated holdings type, we compare the reported number of shares between the original filing and the restatement. Suppose the same stock holding is reported on the original and restatement 13F filings for the same quarter. In that case, the restated holding is classified as *revision up* (*down*) if the number of shares is greater (smaller) on the restatement 13F filing than on the original 13F filing. If the stock holding is reported only on the restatement (original) 13F filing, then it is classified as *new* (*complete revision down*).

Panel A: Delay Period between Quarter-End Date and 13F Amendment Filing Date

Delay (in quarters)	<1	1	2	3	4–7	8–11	12–15	>15	Total
Number of Restatements	1,017	367	160	99	231	91	71	7	2,043
Number of Confidential Filings	106	621	476	283	465	74	24	2	2.051

Panel B: Number of Amendment Filings Filed by Each Hedge Fund Company (HF)

Number of Amendment(s)	0	1	2–5	6–10	11–15	16–20	>20	Total
# HFs filing restatements	935	271	252	56	21	8	7	1,550
# HFs filing confidential filings	1,465	21	26	9	4	3	22	1,550

Panel C: Number of Stock Holdings on 13F Original and Amendment Filings

	N	Mean	SD.	Min.	Q1	Median	Q3	Max.
Original Filings	60,007	162.34	388.23	1	24	54	128	5,973
Restatements	2,043	71.93	279.63	1	2	11	61	3,568
Trade Direction								
Acquisition	2,043	43.33	145.54	0	1	3	27	2,318
Disposition	2,043	28.60	97.80	0	0	1	14	1,035
Restated Holding Type								
Revision Up	2,043	22.42	89.09	0	0	0	3	1,442
Revision Down	2,043	17.87	90.81	0	0	0	1	2,032
New	2,043	23.91	130.72	0	0	1	6	2,602
Complete Revision Down	2,043	7.73	46.24	0	0	0	1	1,180
Confidential Filings	2,051	23.68	153.30	1	1	2	6	1,964

Table 2: Abnormal Returns: Comparison of Original and Restated Holdings

Panel A compares the Carhart (1997) four-factor daily alphas and the average DGTW benchmark-adjusted daily returns between the 13F restatement portfolios and their paired original portfolios during the restatement period (i.e., the window between the current quarter-end date and the restatement filing date). The restatement period is further split into two sub-periods using the original 13F filing date as the cutoff. Each restatement (original) portfolio comprises holdings from the corresponding 13F restatement (original filing), where paired original filings are filed by the same institution for the same calendar quarter. The Carhart four-factor daily alpha is estimated using daily portfolio returns during the restatement periods. For DGTW-adjusted returns, we first compute daily benchmark-adjusted returns for each stock and then average them within each portfolio using the portfolio's value weights. Portfolios in Panel A are grouped by the length of the restatement period. While SEC regulations mandate original 13F filings within 45 days of the quarter-end, we exclude restatements filed within 5 days of the original filing (assumed to correct inadvertent errors). The remaining restatements are categorized as follows: (1) **Q1**, restatements filed in the same calendar quarter as the original filing; (2) **Q2**, restatements filed in the following calendar quarter; (3) **Q3-Q4**, restatements filed within two quarters after the next calendar quarter and (4) **Q4+**, all later restatements. In Panel B, we compare abnormal returns between the restatement and the original portfolio after partitioning restated holdings into acquisition and disposition samples. Within the acquisition/disposition sample, we further categorize restated holdings based on whether the trading direction revealed by the restatement surprises investors relative to the paired original filing. Specifically, surprise occurs when the trading direction inferred from the restatement (e.g., acquisition) is opposite to that inferred from the original filing (e.g., disposition). No surprise occurs when the trading directions align. Panel C compares abnormal returns between restatement and original portfolios by categorizing restated holdings into four types: (1) revision-up, (2) revision-down, (3) new, and (4) complete revision-down. Panel D extends this analysis by separating restatements filed by activist versus non-activist hedge funds. We identify activist funds as those filing at least one Schedule 13D during one year ending in the current quarter. This panel presents two key comparisons: (1) restatement portfolios versus their paired original portfolios, and (2) activist-filed restated holdings versus non-activist-filed restated holdings. Numbers marked with ***, **, and * are significant at the 1%, 5%, and 10% levels, respectively.

Panel A: Full Sample

		Restatement Period Length			
	Full	Q1	Q2	Q3-Q4	Q4+
Daily Four-Factor Alphas (in *bps*)					
[1] *Full Restatement Period*					
[1.1] Restated Holdings	3.622	7.090	1.974	0.566	1.115
[1.2] Original Holdings	2.041	3.510	0.611	0.893	1.521
[1.3] Diff: Restated - Original	1.581**	3.580**	1.363	−0.327	−0.406
(*t*-stat.)	(2.36)	(2.47)	(1.16)	(−0.30)	(−0.74)
[2] *Restatement Sub-Period 1*					
[2.1] Restated Holdings	3.782	5.242	2.381	2.896	3.088
[2.2] Original Holdings	2.662	3.224	2.275	2.107	2.398
[2.3] Diff: Restated - Original	1.120	2.018	0.106	0.789	0.690
(*t*-stat.)	(1.07)	(1.09)	(0.05)	(0.40)	(0.35)
[3] *Restatement Sub-Period 2*					
[3.1] Restated Holdings	18.489	42.249	4.485	0.710	1.674
[3.2] Original Holdings	4.736	10.626	−0.318	1.043	1.492
[3.3] Diff: Restated - Original	13.753***	31.624***	4.804**	−0.333	0.181
(*t*-stat.)	(3.34)	(3.13)	(2.60)	(−0.25)	(0.31)
DGTW Benchmark-Adjusted Daily Returns (in *bps*)					
[1] *Full Restatement Period*					
[1.1] Restated Holdings	0.829	1.647	−0.357	−0.549	1.354
[1.2] Original Holdings	0.576	0.940	−0.186	0.661	0.563
[1.3] Diff: Restated - Original	0.252	0.707	−0.171	−1.210	0.792*
(*t*-stat.)	(0.39)	(0.52)	(−0.13)	(−1.08)	(1.75)
[2] *Restatement Sub-Period 1*					
[2.1] Restated Holdings	0.289	1.055	−1.660	1.958	−0.049
[2.2] Original Holdings	0.388	0.472	−0.633	0.436	1.090
[2.3] Diff: Restated - Original	−0.099	0.583	−1.027	1.522	−1.499
(*t*-stat.)	(−0.11)	(0.35)	(−0.46)	(0.79)	(−1.03)
[3] *Restatement Sub-Period 2*					
[3.1] Restated Holdings	2.303	4.781	0.912	−0.830	1.343
[3.2] Original Holdings	1.366	2.788	−0.263	0.731	0.775
[3.3] Diff: Restated - Original	0.937*	1.933**	1.175*	−1.562*	0.568
(*t*-stat.)	(1.78)	(2.27)	(1.69)	(−1.76)	(1.02)
# of Restatement Filings	1,442	582	299	216	345

Panel B: Acquisition- and Disposition-Motivated Restated Holdings

		Investors Surprised?			
	Full	Surprised	Not Surprised	*Diff.*	(*t*-stat.)
Acquisition Sample					
[1] *Full Restatement Period*					
[1.1] Restated Holdings	4.250	3.786	4.842	−1.056	(0.97)
[1.2] Original Holdings	2.007	1.895	1.924		
[1.3] Diff: Restated - Original	2.243***	1.892**	2.918***		
(*t*-stat.)	(3.23)	(2.53)	(3.34)		
[2] *Restatement Sub-Period 1*					
[2.1] Restated Holdings	5.144	4.525	7.134	−2.609	(−1.42)
[2.2] Original Holdings	2.807	2.669	3.010		
[2.3] Diff: Restated - Original	2.337**	1.856	4.124**		
(*t*-stat.)	(2.10)	(1.48)	(2.49)		
[3] *Restatement Sub-Period 2*					
[3.1] Restated Holdings	17.701	21.632	10.701	10.931**	(1.97)
[3.2] Original Holdings	4.211	4.296	1.701		
[3.3] Diff: Restated - Original	13.491***	17.336***	9.000**		
(*t*-stat.)	(3.14)	(3.09)	(2.39)		
# of Restatement Filings	1,312	1,075	669		
Disposition Sample					
[1] *Full Restatement Period*					
[1.1] Restated Holdings	2.148	2.064	2.391	−0.327	(−0.24)
[1.2] Original Holdings	2.209	2.482	2.220		
[1.3] Diff: Restated - Original	−0.061	−0.418	0.171		
(*t*-stat.)	(−0.08)	(−0.33)	(0.21)		
[2] *Restatement Sub-Period 1*					
[2.1] Restated Holdings	1.484	1.753	3.280	−1.527	(−0.60)
[2.2] Original Holdings	2.899	1.950	2.998		
[2.3] Diff: Restated - Original	−1.415	−0.198	0.282		
(*t*-stat.)	(−0.94)	(−0.08)	(0.18)		
[3] *Restatement Sub-Period 2*					
[3.1] Restated Holdings	6.603	4.046	6.418	−2.372	(−0.33)
[3.2] Original Holdings	3.674	4.091	4.055		
[3.3] Diff: Restated - Original	2.930	−0.045	2.363		
(*t*-stat.)	(0.65)	(−0.01)	(0.54)		
# of Restatement Filings	844	288	781		

Panel C: Different Types of Restated Holdings

	Restated Holdings Type			
	Revision Up	Revision Down	New Holding	Complete Revision Down
Daily Four-Factor Alphas (in *bps*)				
[1] *Full Restatement Period*				
[1.1] Restated Holdings	4.058	3.142	3.787	3.306
[1.2] Original Holdings	2.254	1.886	2.177	2.723
[1.3] Diff: Restated - Original	1.804*	1.257	1.610*	0.584
(*t*-stat.)	(1.72)	(1.32)	(1.90)	(0.36)
[2] *Restatement Sub-Period 1*				
[2.1] Restated Holdings	3.935	3.560	5.156	3.394
[2.2] Original Holdings	2.707	2.301	3.002	2.188
[2.3] Diff: Restated - Original	1.228	1.259	2.154	1.206
(*t*-stat.)	(0.74)	(0.69)	(1.48)	(0.48)
[3] *Restatement Sub-Period 2*				
[3.1] Restated Holdings	19.012	1.683	14.892	−7.272
[3.2] Original Holdings	1.506	4.143	5.130	6.087
[3.3] Diff: Restated - Original	17.506***	−2.460*	9.762**	−13.815**
(*t*-stat.)	(2.94)	(−1.78)	(2.12)	(−2.05)
DGTW Benchmark-Adjusted Daily Returns (in *bps*)				
[1] *Full Restatement Period*				
[1.1] Restated Holdings	0.331	−0.024	1.939	0.378
[1.2] Original Holdings	0.641	−0.140	0.635	0.340
[1.3] Diff: Restated - Original	−0.310	0.116	1.305	0.038
(*t*-stat.)	(−0.33)	(0.13)	(1.51)	(0.02)
[2] *Restatement Sub-Period 1*				
[2.1] Restated Holdings	0.278	−1.349	1.178	1.785
[2.2] Original Holdings	−0.039	−0.278	0.196	−0.755
[2.3] Diff: Restated - Original	0.317	−1.072	0.981	2.541
(*t*-stat.)	(0.23)	(−0.66)	(0.79)	(0.96)
[3] *Restatement Sub-Period 2*				
[3.1] Restated Holdings	2.892	0.006	3.410	−0.716
[3.2] Original Holdings	1.030	0.238	1.853	0.089
[3.3] Diff: Restated - Original	1.862*	−0.232	1.556*	−0.805
(*t*-stat.)	(1.93)	(−0.12)	(1.94)	(−0.78)
# of Restatement Filings	584	493	1,034	231

Panel D: Activist vs. Non-Activist Hedge Fund Restatements

	Full Sample				Acquisition Subsample			
	Activist Funds	Non-Activist Funds	*Diff.*	(*t*-stat.)	Activist Funds	Non-Activist Funds	*Diff.*	(*t*-stat.)
Daily Four-Factor Alphas (in *bps*)								
[1] *Full Restatement Period*								
[1.1] Restated Holdings	7.861	2.646	5.215***	(2.64)	8.651	3.280	5.371**	(2.54)
[1.2] Original Holdings	2.885	1.847			2.990	1.790		
[1.3] Diff: Restated - Original	4.976***	0.799			5.661***	1.490**		
(*t*-stat.)	(2.72)	(1.13)			(2.81)	(2.07)		
[2] *Restatement Sub-Period 1*								
[2.1] Restated Holdings	8.405	2.717	5.689**	(2.17)	10.884	3.878	7.005***	(2.61)
[2.2] Original Holdings	2.760	2.640			3.004	2.763		
[2.3] Diff: Restated - Original	5.646**	0.077			7.879***	1.116		
(*t*-stat.)	(2.22)	(0.07)			(3.19)	(0.90)		
[3] *Restatement Sub-Period 2*								
[3.1] Restated Holdings	21.538	17.787	3.751***	(2.32)	21.653	16.830	4.823**	(2.44)
[3.2] Original Holdings	5.416	4.579			4.866	4.066		
[3.3] Diff: Restated - Original	16.122**	13.207***			16.787**	12.764***		
(*t*-stat.)	(2.42)	(3.05)			(2.53)	(2.75)		
DGTW Benchmark-Adjusted Daily Returns (in *bps*)								
[1.1] Restated Holdings	2.702	0.460	2.273	(1.17)	3.813	0.707	3.107*	(1.86)
[1.2] Original Holdings	0.475	0.598			0.572	0.675		
[1.3] Diff: Restated - Original	2.227	−0.169			2.241	0.032		
(*t*-stat.)	(1.13)	(−0.26)			(1.31)	(0.05)		
[2] *Restatement Sub-Period 1*								
[2.1] Restated Holdings	4.273	−0.560	4.833**	(2.13)	3.665	0.044	3.621*	(1.87)
[2.2] Original Holdings	−0.054	0.483			0.216	0.489		
[2.3] Diff: Restated - Original	4.327***	−1.043			3.449**	−0.445		
(*t*-stat.)	(2.70)	(−1.06)			(1.97)	(−0.42)		
[3] *Restatement Sub-Period 2*								
[3.1] Restated Holdings	2.325	2.298	0.028	(0.01)	4.845	1.814	3.031*	(1.94)
[3.2] Original Holdings	0.467	1.558			0.060	1.791		
[3.3] Diff: Restated - Original	1.858	0.740			4.785**	0.024		
(*t*-stat.)	(0.53)	(0.59)			(2.34)	(0.02)		
# of Restatement Filings	270	1,172			237	1,075		

Table 3: Information Intensity Comparison Between Original and Restated Holdings

This table compares information event intensity between restated holdings and original holdings during the restatement period. We measure information event intensity as the count of unanticipated 8-K filings occurring during the restatement period. An 8-K filing is considered anticipated if: (1) it contains Item 2.02, (2) it is filed within the three-day window around an earnings announcement, or (3) it is filed within one day of the 13F restatement. Panel A compares the intensity of information events between restated and original holdings, with restatements grouped by their restatement period length. Panel B compares information event intensity after partitioning restated holdings into acquisition and disposition samples. Within each sample, we further analyze the intensity of good versus bad news. We classify news using cumulative abnormal returns (CARs) over the [-1, +1] window around each 8-K filing date, with abnormal returns calculated using the Carhart (1997) model estimated over the period from 300 to 91 days before the 8-K filing date. Numbers marked with ***, **, and * are significant at the 1%, 5%, and 10% levels, respectively.

Panel A: Full Sample

		Restatement Period Delay			
	Full	Q1	Q2	Q3-Q4	Q4+
[1] *Full Restatement Period*					
[1.1] Restated Holdings	5.455	1.501	3.288	6.045	13.323
[1.2] Original Holdings	5.474	1.374	2.752	5.475	14.396
[1.3] Diff: Restated - Original	−0.019	0.127**	0.536***	0.571	−1.073**
(*t*-stat.)	(−0.14)	(2.18)	(2.85)	(1.45)	(−2.35)
[2] *Restatement Sub-Period 1*					
[2.1] Restated Holdings	0.888	0.985	0.994	0.835	0.676
[2.2] Original Holdings	0.831	0.898	0.845	0.805	0.725
[2.3] Diff: Restated - Original	0.058**	0.087**	0.149**	0.030	−0.049
(*t*-stat.)	(2.30)	(2.22)	(2.26)	(0.44)	(−1.22)
[3] *Restatement Sub-Period 2*					
[3.1] Restated Holdings	4.549	0.489	2.271	5.208	12.637
[3.2] Original Holdings	4.624	0.452	1.891	4.663	13.646
[3.3] Diff: Restated - Original	−0.075	0.037*	0.379***	0.545	−1.010**
(*t*-stat.)	(−0.60)	(1.72)	(2.77)	(1.55)	(−2.31)
# of Restatement Filings	1,442	582	299	216	345

Panel B: Acquisition- and Disposition-Motivated Restated Holdings

		Nature of News			
	Full	Good News	Bad News	*Diff.*	(*t*-stat.)
Acquisition Sample ($N = 1,312$)					
[1] *Full Restatement Period*					
[1.1] Restated Holdings	5.548	2.786	2.762	0.024	(0.63)
[1.2] Original Holdings	5.573	2.748	2.825	−0.077***	(−3.83)
[1.3] Diff: Restated - Original	−0.025	0.038	−0.063	0.101**	(2.30)
(*t*-stat.)	(−0.18)	(0.52)	(−0.81)		
[2] *Restatement Sub-Period 1*					
[2.1] Restated Holdings	0.873	0.426	0.447	−0.022	(−1.17)
[2.2] Original Holdings	0.824	0.405	0.419	−0.014*	(−1.88)
[2.3] Diff: Restated - Original	0.049*	0.021	0.028*	−0.007	(−0.37)
(*t*-stat.)	(1.91)	(1.35)	(1.65)		
[3] *Restatement Sub-Period 2*					
[3.1] Restated Holdings	4.655	2.349	2.306	0.043**	(2.24)
[3.2] Original Holdings	4.729	2.333	2.396	−0.063***	(−3.52)
[3.3] Diff: Restated - Original	−0.074	0.016	−0.090	0.106***	(2.67)
(*t*-stat.)	(−0.56)	(0.24)	(−1.26)		
Disposition Sample ($N = 844$)					
[1] *Full Restatement Period*					
[1.1] Restated Holdings	6.312	3.093	3.219	−0.126***	(−2.64)
[1.2] Original Holdings	5.925	2.921	3.004	−0.083***	(−3.14)
[1.3] Diff: Restated - Original	0.387**	0.172*	0.215**	−0.043	(−0.78)
(*t*-stat.)	(2.19)	(1.87)	(2.31)		
[2] *Restatement Sub-Period 1*					
[2.1] Restated Holdings	0.883	0.434	0.449	−0.015	(−0.73)
[2.2] Original Holdings	0.790	0.389	0.401	−0.011	(−1.18)
[2.3] Diff: Restated - Original	0.093***	0.045**	0.048**	−0.003	(−0.15)
(*t*-stat.)	(2.88)	(2.24)	(2.46)		
[3] *Restatement Sub-Period 2*					
[3.1] Restated Holdings	5.408	2.648	2.760	−0.112***	(−2.70)
[3.2] Original Holdings	5.114	2.521	2.594	−0.073***	(−3.08)
[3.3] Diff: Restated - Original	0.294*	0.127	0.167*	−0.039	(−0.82)
(*t*-stat.)	(1.80)	(1.51)	(1.94)		

Table 4: Market Reaction to Disclosure of 13F Restatement

This table examines market reactions to 13F restatement filings by reporting mean cumulative abnormal returns (CARs). We treat each restatement as a single event, weighting all restated holdings in the filing equally. Abnormal returns are calculated using the Carhart (1997) model, with an estimation window ranging from 300 to 91 days before the event date. We report CARs for three event windows: [-1, +1], [-3, +3], and [-5, +5] around the filing date. Results are shown for the full sample of restatements and are further partitioned into acquisition- and disposition-motivated subsamples. Numbers marked with ***, **, and * are significant at the 1%, 5%, and 10% levels, respectively.

	Full Sample ($N = 1,442$)		Acquisition Sample ($N = 1,312$)		Disposition Sample ($N = 844$)	
Window	Mean CAR	t-stat.	Mean CAR	t-stat.	Mean CAR	t-stat.
$[-1, +1]$	0.410%***	(4.44)	0.445%***	(4.41)	−0.160%	(−1.08)
$[-3, +3]$	0.411%***	(2.92)	0.444%***	(2.83)	−0.349%	(−1.39)
$[-5, +5]$	0.574%***	(3.03)	0.565%***	(2.87)	0.034%	(0.10)

Table 5: Determinants of 13F Restatements: Fund-Level Analysis

This table analyzes the fund-level determinants of hedge funds' 13F restatements. We estimate probit models with an indicator variable for restatements as the dependent variable. Column (1) reports coefficient estimates with t-statistics in parentheses. Column (2) replicates this analysis while adding $Log(13F\_DL)$ as an additional control variable, measuring the number of EDGAR downloads for previously filed 13F reports during the year ending in the current quarter. Due to EDGAR data availability constraints (through March 31, 2017), the sample size in Column (2) is smaller than in Column (1). Both specifications include quarter fixed effects and cluster-robust standard errors at the institution level. Coefficient significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

	(1)	(2)
Log(Age)	−0.058	−0.043
	(−1.23)	(−0.92)
Log(PortSize)	0.096***	0.113***
	(6.07)	(6.11)
Turnover	0.295*	0.384***
	(2.28)	(2.86)
PortHHI	−0.241	−0.195
	(−1.22)	(−0.93)
PortRet	−0.191	−0.111
	(−0.90)	(−0.51)
/Flow/	0.093***	0.089***
	(4.93)	(4.54)
PortVol	−1.137	−1.023
	(−0.87)	(−0.75)
Activism	0.030	0.054*
	(0.98)	(1.70)
Log(Prior_Rest)	0.308***	0.303***
	(4.71)	(4.40)
Log(Prior_Conf)	0.137***	0.173***
	(3.23)	(4.02)
Log(Prior_ConfDeny)	−0.256**	−0.338***
	(−2.11)	(−3.04)
Log(13F_DL)		−0.061***
		(−2.75)
Constant	−1.604*	−1.744**
	(−2.25)	(−2.45)
Quarterly FE	Yes	Yes
S.E. Cluster	Institution	Institution
N	34,868	31,838
Pseudo R^2	0.123	0.045

Table 6: Determinants of 13F Restated Holdings: Stock-Level Analysis

This table presents probit regression results analyzing the determinants of 13F restated holdings. Column (1) uses an indicator variable for restated holdings (i.e., *D_Rest*) as the dependent variable. Columns (2) and (3) further categorize restated holdings by trading direction, with *D_Rest_Acq* representing acquisition-motivated holdings and *D_Rest_Dis* representing disposition-motivated holdings. For all specifications, we report coefficient estimates with corresponding t-statistics in parentheses. The *Diff.* column displays coefficient differences between acquisition-motivated versus disposition-motivated restated holding estimations, with chi-statistics shown in brackets. All regressions incorporate quarter and Fama-French 17 industry fixed effects, with standard errors adjusted for heteroskedasticity and clustered at the institution level. Coefficients marked with ***, **, and * are significant at the 1%, 5%, 10% level, respectively.

	(1)	(2)	(3)	
	D_Rest	*D_Rest_Acq*	*D_Rest_Dis*	*Diff.*
MA_Target	0.020	0.037*	−0.010	−0.047**
	(1.36)	(1.94)	(−0.78)	[5.52]
Log(StockSize)	0.007	0.001	0.014	0.013
	(0.59)	(0.05)	(1.40)	[2.58]
Illiquidity	−0.155***	−0.186***	−0.086*	0.100*
	(−2.85)	(−2.92)	(−1.67)	[2.60]
Log(NAnalyst)	0.011	0.010	0.012	0.002
	(0.83)	(0.74)	(0.86)	[0.06]
StockVol	−0.069	0.063	−0.269*	−0.206**
	(−0.53)	(0.47)	(−1.77)	[4.24]
D_DtD	0.004	0.008	−0.005	−0.013
	(0.22)	(0.40)	(−0.23)	[0.31]
BM	0.002***	0.003***	0.001	−0.002**
	(2.75)	(3.09)	(1.33)	[4.06]
AdjRet	0.004	0.014**	−0.014**	−0.028**
	(1.38)	(2.20)	(−2.08)	[4.13]
Actvism_Target	−0.005	−0.001	−0.009	−0.008
	(−0.61)	(−0.16)	(−1.15)	[1.46]
Constant	−2.702***	−2.911***	−2.943***	
	(−12.65)	(−15.46)	(−12.50)	
Quarterly FE	Yes	Yes	Yes	
FFI17 FE	Yes	Yes	Yes	
S.E. Cluster	Institution	Institution	Institution	
N	6,054,089	6,054,089	6,054,089	
Pseudo R^2	0.046	0.042	0.046	

Table 7: 13F Portfolio Return Gap

This table presents average monthly returns for updated portfolios, original portfolios, and their return gaps in institution-quarters where at least one restatement was filed before the next quarter-end. The original portfolios comprise holdings from original 13F filings, while updated portfolios reflect adjustments based on subsequently filed restatements. For both portfolio types, we calculate raw and DGTW benchmark-adjusted monthly returns under the assumption that holdings remain unchanged for three months following each quarter-end date. The return gap, defined as the difference between updated and original portfolio returns, equals zero in institution-quarters without restatements. We compare original portfolio returns between institution-quarters with and without restatement filings to assess potential performance differences. Numbers marked with ***, **, and * are significant at the 1%, 5%, 10% level, respectively.

	Institution-Quarters: No Restatement Was Filed Before Next Quarter-End Date ($N = 57,228$)		Institution-Quarters: An Restatement Was Filed Before Next Quarter-End Date ($N = 1,914$)		*Diff.*	
	Raw Return	DGTW Return	Raw Return	DGTW Return	Raw Return	DGTW Return
Original Portfolio Return	0.866%***	0.020%**	0.858%***	0.074%*	0.007%	−0.054%
Updated Portfolio Return			0.885%***	0.094%**		
Return Gap			0.027%	0.020%		
			(1.27)	(1.09)		

Table 8: Restatement Return Gap and Hedge Fund Future Reported Returns: A Portfolio Analysis

This table analyzes the relationship between restated return gaps and hedge fund companies' future reported returns using portfolio analysis. At the beginning of each quarter, we calculate the average monthly DGTW benchmark-adjusted return gap for each hedge fund company over the preceding three months. The return gap represents the difference between returns of: (1) portfolios updated using restatements filed before the next quarter-end and (2) original 13F portfolios. We sort hedge fund companies into three groups based on the sign of the return gap (i.e., positive, zero, and negative gaps). For each group, we calculate the average monthly reported returns of hedge fund companies over the subsequent three months. Hedge fund company's value-weighted reported returns use each fund's assets under management (AUM) as weights. Both panels report: (1) raw returns, (2) abnormal returns adjusted for the eight Fung and Hsieh (2001) hedge fund risk factors, and (3) return differences between positive and negative groups. Numbers marked with ***, **, and * are significant at the 1%, 5%, 10% level, respectively.

	Equal-Weighted Reported Returns		Value-Weighted Reported Returns	
	Raw Return	Eight-Factor Alpha	Raw Return	Eight-Factor Alpha
Positive Gap	0.785%***	0.581%***	0.999%***	0.820%***
	(5.26)	(4.87)	(5.45)	(5.27)
Zero Gap	0.609%***	0.368%***	0.604%***	0.369%***
	(4.83)	(7.12)	(3.92)	(5.96)
Negative Gap	0.549%***	0.297%**	0.500%***	0.313%
	(3.41)	(2.24)	(2.22)	(1.57)
Diff.: Positive - Negative	0.235%*	0.285%*	0.499%**	0.506%**
	(1.79)	(1.82)	(2.20)	(2.12)

Table 9: Restatement Return Gap and Hedge Fund Future Reported Returns: A Regression Analysis

This table examines the relationship between restated return gaps and hedge fund companies' future reported returns using regression analysis. At the beginning of each quarter, we calculate each hedge fund company's average monthly DGTW benchmark-adjusted return gap over the previous three months. The indicator variable *D_PosGap* (*D_NegGap*) equals one for positive (negative) average return gaps and zero otherwise. The dependent variables are the hedge fund company's equal-weighted and value-weighted monthly reported returns during the quarter. For value-weighted returns, we weigh individual fund returns by their assets under management (AUM). The regression includes both time and hedge fund company fixed effects. Coefficients marked with ***, **, and * are significant at the 1%, 5%, 10% level, respectively.

DV =	Equal-Weighted Reported Return		Value-Weighted Reported Return	
	Coef.	*t*-stat.	Coef.	*t*-stat.
D_PosGap	0.300***	(1.99)	0.333**	(2.13)
D_NegGap	0.036	(0.23)	−0.038	(−0.23)
Fund Characteristics				
Log(NFund)	−0.112	(−1.05)	−0.118	(−1.08)
Log(AUM)	−0.019	(−0.57)	−0.020	(−0.58)
Log(Age)	0.049	(0.22)	0.120	(0.53)
Log(PortSize)	−0.202***	(−6.19)	−0.203***	(−6.04)
Turnover	−0.098	(−0.47)	−0.139	(−0.65)
PortHHI	−0.149	(−0.56)	0.010	(0.04)
|Flow|	0.020	(0.70)	0.018	(0.62)
PortVol	−3.217	(−1.45)	−3.517	(−1.54)
Activism	−0.015	(−0.25)	−0.064	(−1.04)
Stock Characteristics				
Log(NAnalyst)	−0.001	(−0.01)	−0.030	(−0.30)
BM	−0.007	(−0.83)	−0.008	(−0.86)
Illiquidity	−0.718**	(−2.23)	−0.768**	(−2.32)
StockVol	−0.839	(−0.61)	−0.861	(−0.60)
D_DtD	2.127***	(7.36)	1.956***	(6.56)
Activism_Target	0.063	(0.26)	0.147	(0.59)
MA_Target	−0.501*	(−1.80)	−0.576**	(−2.01)
Year × Month FE	Yes		Yes	
Institution FE	Yes		Yes	
N	26,584		26,584	
Adj. R^2	0.264		0.258	

Table 10: Restatement Return Gap and Investor Responses

This table analyzes investor responses to observed restatement return gaps. At the beginning of each quarter, we calculate each hedge fund company's average monthly DGTW benchmark-adjusted return gap over the previous three months. We create indicator variables *D_PosGap* (positive gaps) and *D_NegGap* (negative gaps) to categorize these return gaps. Panel A measures investor responses using the logarithm of EDGAR downloads (*Log(DL)*) for previously filed 13F reports during the current quarter. We examine total downloads as well as separate counts for: (1) original filings (*Log(DL_Org)*), (2) restatements (*Log(DL_Rest)*), and (3) confidential filings (*Log(DL_Conf)*). Panel B uses current quarter fund flows as an alternative response measure. Both panels employ regression specifications that include time and hedge fund company fixed effects. Coefficients marked with ***, **, and * are significant at the 1%, 5%, 10% level, respectively.

Panel A: 13F Filing Download Volume

DV =	*Log(DL)*		*Log(DL_Org)*		*Log(DL_Rest)*		*Log(DL_Conf)*	
	Coef.	*t*-stat.	Coef.	*t*-stat.	Coef.	*t*-stat.	Coef.	*t*-stat.
D_PosGap	0.111***	(2.56)	−0.090**	(−2.16)	1.408***	(19.66)	−0.034	(−1.19)
D_NegGap	0.129***	(2.82)	−0.088**	(1.98)	1.423***	(18.80)	−0.001	(−0.01)
Fund Characteristics								
Log(NFund)	−0.075**	(−2.40)	−0.069**	(−2.26)	−0.062	(−1.19)	−0.016	(−0.77)
Log(AUM)	0.067***	(6.73)	0.070***	(7.23)	0.017	(1.01)	0.003	(0.42)
Log(Age)	0.068	(1.00)	0.078	(1.19)	−0.471***	(−4.20)	−0082*	(−1.85)
Log(PortSize)	0.152***	(15.98)	0.141***	(15.33)	0.098***	(6.26)	0.042***	(6.84)
Turnover	0.031	(0.51)	0.015	(0.26)	−0.176*	(−1.77)	0.014	(0.36)
PortHHI	0.227***	(2.86)	0.188**	(2.45)	0.203	(1.55)	0.253***	(4.88)
|Flow|	−0.012	(−1.43)	−0.007	(−0.92)	−0.027**	(−2.00)	0.006	(1.11)
PortVol	−2.079***	(−3.21)	−1.715***	(−2.73)	−4.786***	(−4.47)	−1.133***	(−2.68)
Activism	0.059***	(3.35)	0.055***	(3.20)	0.024	(0.83)	−0.018	(−1.58)
Stock Characteristics								
Log(NAnalyst)	−0.085***	(−2.93)	−0.084***	(−2.99)	−0.093*	(−1.95)	0.040**	(2.11)
BM	0.002	(0.94)	0.002	(0.95)	0.001	(0.31)	0.001	(0.53)
Illiquidity	−0.087	(−0.95)	−0.069	(−0.78)	−0.133	(−0.88)	0.189***	(3.16)
StockVol	2.064***	(5.05)	1.826***	(4.62)	1.092	(1.62)	1.067***	(4.00)
D_DtD	0.037	(0.44)	0.029	(0.36)	0.201	(1.44)	−0.173***	(−3.14)
Activism_Target	−0.080	(−1.10)	−0.065	(−0.93)	−0.027	(−0.22)	−0.199***	(−4.18)
MA_Target	−0.082	(−1.00)	−0.079	(−1.01)	0.034	(0.25)	−0.212***	(−4.00)
Year × Quarter FE	Yes		Yes		Yes		Yes	
Institution FE	Yes		Yes		Yes		Yes	
N	8,477		8,477		8,477		8,477	
Adj. R^2	0.898		0.902		0.489		0.735	

Panel B: Fund Flow

DV =	*F1_Flow*		*F1_Flow*	
	Coef.	*t*-stat.	Coef.	*t*-stat.
D_PosGap	0.118*	(1.89)	−0.010	(−0.09)
D_NegGap	0.032	(0.47)	0.195	(1.27)
Log(DL_Rest)			0.030***	(2.96)
D_PosGap × *Log(DL_Rest)*			0.033**	(2.49)
D_NegGap × *Log(DL_Rest)*			−0.076*	(−1.77)
Fund Characteristics				
Log(NFund)	−0.125***	(−2.74)	−0.124***	(−2.73)
Log(AUM)	0.183***	(12.61)	0.184***	(12.64)
Log(Age)	−0.166*	(−1.68)	−0.152	(−1.54)
Log(PortSize)	−0.456***	(−32.01)	−0.460***	(−32.18)
Turnover	−0.552***	(−6.40)	−0.546***	(−6.33)
PortHHI	1.429***	(11.80)	1.422***	(11.74)
|Flow|	−0.139***	(−12.85)	−0.138***	(−12.71)
PortVol	−0.782	(−0.83)	−0.660	(−0.70)
Activism	0.063**	(2.48)	0.063**	(2.46)
Stock Characteristics				
Log(NAnalyst)	0.158***	(3.70)	0.163***	(3.81)
BM	0.001	(0.33)	0.001	(0.32)
Illiquidity	−0.180	(−1.35)	−0.177	(−1.33)
StockVol	1.053*	(1.76)	1.031*	(1.72)
D_DtD	−0.143	(−1.14)	−0.150	(−1.20)
Activism_Target	−0.478***	(−4.40)	−0.477***	(−4.40)
MA_Target	0.967***	(7.96)	0.966***	(7.95)
Year × *Quarter FE*	Yes		Yes	
Institution FE	Yes		Yes	
N	8,344		8,344	
Adj. R^2	0.259		0.260	

Appendix A: An Example of a 13F Restatement Header

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 13F

Form 13F COVER PAGE

Report for the Calendar Year or Quarter Ended: December 31, 1999

Check here if Amendment [X]; Amendment Number: 2
--

This Amendment (Check only one.): [X] is a restatement.
[ ] adds new holdings entries.

Institutional Investment Manager Filing this Report:

Name: Symphony Asset Management LLC
Address: 555 California Street
Suite 2975
San Francisco, California 94104

Form 13F File Number: 28-5958

The institutional investment manager filing this report and the person by whom it is signed hereby represent that the person signing the report is authorized to submit it, that all information contained herein is true, correct and complete, and that it is understood that all required items, statements, schedules, lists, and tables, are considered integral parts of this form.

Person Signing this Report on Behalf of Reporting Manager:

Name: Neil L. Rudolph
Title: COO
Phone: (415) 676-4000

Signature, Place, and Date of Signing:

/s/ Neil L. Rudolph	San Francisco, California	07/10/01
[Signature]	[City, State]	[Date]

Appendix B: Definitions of Variables

Variable	Definitions
13F_DL	The count of historical 13F filings downloaded from SEC EDGAR for the same hedge fund company during the 12 months preceding the current quarter-end date.
Activism	The count of Schedule 13D filed by the hedge fund company during the 12 months preceding the current quarter-end date.
Activism_Target	A indicator equal to one if the stock was subject to activist investor attention as evidenced by a Schedule 13D filing during the 12 months preceding the quarter-end date, and zero otherwise.
AdjRet	The 12-month cumulative stock return measured before the quarter-end date, market-adjusted using the CRSP value-weighted return over the corresponding period.
Age	The number of years since the institution's first appearance on Thomson Reuters.
NAnalyst	The count of unique analysts providing at least one earnings forecast or stock recommendation for the firm in the I/B/E/S database during the twelve months preceding the quarter-end date
BM	Book-to-market ratio.
Flow	Change in total portfolio value between two consecutive quarters net of the increase due to returns.
D_DtD	An indicator equal to one if the Merton (1974) distance-to-default measure is smaller than 1.64, and zero otherwise.
D_NegGap	An indicator equal to one if the hedge fund company's three-month average DGTW-adjusted restatement return gap is negative as of the quarter-end date, and zero otherwise.
D_PosGap	An indicator equal to one if the hedge fund company's three-month average DGTW-adjusted restatement return gap is positive as of the quarter-end date, and zero otherwise.
Illiquidity	Stock illiquidity calculated as the average of the square root of daily $\|Return\|/(Price \times Vol)$.
MA_Target	An indicator equal to one if the stock was subject to a publicly announced M&A transaction during the 12 months preceding the current quarter-end date, and zero otherwise.
PortHHI	The Herfindahl index of the portfolio, which is calculated from the market value of each component stock.
PortSize	Total equity portfolio size of an institution calculated as the market value of its quarter-end holdings.
PortRet	The value-weighted average monthly return of all holdings in a hedge fund's 13F portfolio during the quarter, with weights based on each position's market value at the beginning of the month.
PortVol	The standard deviation of monthly idiosyncratic portfolio returns measured over a 36-month rolling window, where abnormal returns are estimated using the Carhart (1997) four-factor model.

Variable	Definitions
Prior_Conf	The count of 13F confidential filings submitted by the hedge fund company during the 12 months ending in the current quarter-end date.
Prior_ConfDeny	The count of 13F confidential filings submitted by the hedge fund company during the preceding 12-month period where the SEC denied confidential treatment requests.
Prior_Rest	The count of 13F restatements filed by the hedge fund company during the 12 months ending in the current quarter-end date.
StockSize	Quarter-end market capitalization of the stock in billions of dollars.
Turnover	Inter-quarter portfolio turnover rate calculated as the lesser of purchases and sales divided by the average portfolio size of the last and current quarters.
StockVol	The standard deviation of monthly idiosyncratic stock returns measured over a 36-month rolling window, where abnormal returns are estimated using the Carhart (1997) four-factor model.

Internet Appendix to

"Do Hedge Funds Strategically Misreport Their Holdings? Evidence from 13F Restatements"

Table IA.1: Timing Between 8-K and 13F Restatements

This table reports descriptive statistics on the time lag (in days) between the filing date of Form 8-K disclosures and the filing date of the corresponding Form 13F restatements for restated holdings. We restrict the sample to Form 8-K filings that occur after the original Form 13F filing date and before the subsequent Form 13F restatement filing date. Each original filing and restatement pair is filed by the same investment company for the same calendar quarter. Panel A reports descriptive statistics for all restated holdings. Panel B reports descriptive statistics separately by the length of the restatement period. Panel C reports descriptive statistics separately for acquisition-motivated and disposition-motivated restated holdings.

Panel A: All Restated Holdings

	Mean	**Min.**	**1st Pctl**	**5th Pctl**	**10th Pctl**	**Q1**	**Median**	**Q3**	**90th Pctl**	**95th Pctl**	**99th Pctl**	**Max.**
	409	0	3	18	35	112	319	641	938	1,098	1,329	1,490

Panel B: Restatement Period Delay

	Mean	**Min.**	**1st Pctl**	**5th Pctl**	**10th Pctl**	**Q1**	**Median**	**Q3**	**90th Pctl**	**95th Pctl**	**99th Pctl**	**Max.**
Q1	29	0	0	2	6	15	28	42	51	58	70	90
Q2	65	0	0	6	12	29	65	97	118	130	149	181
Q3-Q4	133	0	2	13	26	68	125	189	253	286	316	364
Q4+	492	0	8	43	89	210	428	727	989	1,139	1,349	1,490

Panel C: Acquisition- and Disposition-Motivated Restated Holdings

	Mean	**Min.**	**1st Pctl**	**5th Pctl**	**10th Pctl**	**Q1**	**Median**	**Q3**	**90th Pctl**	**95th Pctl**	**99th Pctl**	**Max.**
Acquisition	393	0	3	15	30	98	295	610	917	1,088	1,338	1,490
Disposition	418	0	4	20	37	119	330	654	946	1,100	1,323	1,490

Table IA.2: Market Reaction to Disclosure of 13F Restatement

This table reports mean cumulative abnormal returns (CARs) around Form 13F restatement filing dates. Each restatement filing is treated as a single event. To mitigate concerns that observed price reactions reflect the disclosure of contemporaneous material events rather than the restatement itself, we exclude restated holdings associated with Form 8-K filings occurring within one week prior to the Form 13F restatement filing date. All remaining restated holdings within a filing are weighted equally. Abnormal returns are estimated using the Carhart (1997) four-factor model, with an estimation window from 300 to 91 trading days prior to the event date. We report CARs over three event windows: [1, +1], [3, +3], and [5, +5] relative to the restatement filing date. Results are reported for the full sample of restatements and separately for acquisition-motivated and disposition-motivated subsamples. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Full Sample ($N = 1,442$)		Acquisition Sample ($N = 1,312$)		Disposition Sample ($N = 844$)	
Window	Mean CAR	t-stat.	Mean CAR	t-stat.	Mean CAR	t-stat.
$[-1, +1]$	0.362%***	(3.75)	0.429%***	(3.98)	−0.223%	(−1.48)
$[-3, +3]$	0.279%*	(1.84)	0.358%**	(2.11)	−0.315%*	(−1.66)
$[-5, +5]$	0.480%**	(2.35)	0.549%***	(2.56)	−0.266%	(−0.71)

Table IA.3: Determinants of 13F Restated Holdings: Stock-Level Analysis

This table reports linear probability model estimates of the stock-level determinants of Form 13F restated holdings. Column (1) uses an indicator for whether a holding is restated (*D_Rest*) as the dependent variable. Columns (2) and (3) further distinguish restated holdings by trading direction: *D_Rest_Acq* identifies acquisition-motivated restatements, and *D_Rest_Dis* identifies disposition-motivated restatements. All specifications include institution × quarter fixed effects, so identification comes from cross-sectional variation across stocks within the same institution and reporting quarter. Coefficient estimates are reported with t-statistics in parentheses, computed using heteroskedasticity-robust standard errors clustered at the institution level. The "Diff." column reports the difference in coefficient estimates between acquisition-motivated and disposition-motivated restatements. Statistical significance of these differences is assessed using a cluster bootstrap procedure with 100 replications at the institution level; corresponding z-statistics are reported in brackets. Coefficients marked with ***, **, and * are significant at 1%, 5%, 10% level, respectively.

	(1)	(2)	(3)	
	D_Rest	*D_Rest_Acq*	*D_Rest_Dis*	*Diff.*
MA_Target	0.059	0.088**	−0.029	0.117**
	(1.13)	(1.97)	(−0.87)	[2.07]
Log(StockSize)	0.068***	0.024	0.044***	−0.020
	(2.95)	(1.52)	(3.75)	[−1.21]
Illiquidity	0.064	0.001	0.063*	−0.063*
	(−2.85)	(0.01)	(1.95)	[−1.71]
Log(NAnalyst)	0.064**	0.027	0.037**	−0.010
	(2.04)	(1.39)	(2.50)	[−0.80]
StockVol	0.443*	0.384*	0.059	0.325
	(1.85)	(1.76)	(0.41)	[1.12]
D_DtD	0.043	0.036	0.0075	0.029
	(1.02)	(1.40)	(0.26)	[1.15]
BM	0.005**	0.006***	−0.001	0.007**
	(2.40)	(2.85)	(−0.25)	[2.52]
AdjRet	−0.012	0.013	−0.025*	0.038*
	(−0.69)	(0.63)	(−1.78)	[1.94]
Actvism_Target	0.002	0.009	−0.006	0.015
	(0.21)	(0.97)	(−0.96)	[1.35]
Constant	0.858***	0.685***	0.173	
	(3.47)	(4.24)	(1.52)	
FE		Institution × Quarter		
S.E. Cluster		Institution		
N	6,268,026	6,268,026	6,268,026	
Pseudo R^2	0.629	0.420	0.301	