Information Acquisition By Mutual Fund Investors: Evidence From Stock Trading Suspensions

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Abstract

Mutual funds offer two primary services: managing asset portfolios and creating liquid demandable shares. This paper shows that liquidity created by mutual funds induces investors to acquire information about illiquid assets in fund portfolios. We study this liquidity channel of information acquisition by examining trading suspension events in China, which turn stocks perfectly illiquid until their resumption dates. Consistent with our theoretical framework, illiquid stocks with large exposures to mutual funds experience increased information acquisition activities, and investors purchase and redeem fund shares to exploit the stale prices of such holdings. When trading resumes, large price movements of these stocks reflect the information acquired by investors.

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Global open-end mutual funds hold over $60 trillion of financial assets (ICI, 2023). Through demandable shares issued by these funds, investors can adjust the quantity of investment at daily net asset values (NAVs). This mechanism provides a highly liquid avenue of investing in illiquid assets, which investors may otherwise overlook due to the difficulty of trading. As a growing number of mutual funds now invest in illiquid assets we investigate whether the liquidity created by these funds influences investors' information choices. We show that investors acquire information about illiquid assets in fund portfolios, and their information is reflected in both fund flows and asset prices. Therefore, our findings imply a liquidity channel whereby mutual funds induce investors to scrutinize illiquid assets.

We shed light on this liquidity channel using a unique empirical setting based on the Chinese market. Our setting offers a laboratory where many stocks become perfectly illiquid during prolonged periods of trading suspensions. Consequently, mutual funds holding these stocks report stale net asset values. Such stale values are interesting because, to evaluate the sign and size of mispricing, investors need firm-specific information. By examining investor activities during suspensions and price movements at resumptions, we gain insights into how an illiquid stock's exposure to mutual funds affects information acquisition.

To guide our empirical analysis, we develop a model of fund investors' information acquisition. The model considers a risky asset, a mutual fund that holds this asset, and investors who acquire information in a rational expectations framework. In the model, the risky asset might become non-tradable after investors make information choices. When this occurs, investors may invest in the fund's shares, whose net asset value is mispriced due to the non-tradable portfolio asset. Our model predicts that flows to the fund are positively associated with its underpricing. Our model also predicts that when the asset has a larger portfolio weight in the fund, investors acquire more information about it, leading to a more informative price when the asset becomes tradable.

Several empirical facts suggest that our setting provides a useful laboratory for testing these predictions. First, when trading resumes, stock prices exhibit large positive or negative movements. A substantial fraction of these movements is firm-specific and can be predicted by ex-ante variables, including an AI signal extracted from firm announcements. Second, many mutual funds hold suspended stocks, some of them with significant portfolio weights. Third, funds generally fail to accurately adjust their net asset values for suspended holdings, leaving investors with opportunities to profit from mispriced mutual funds.

We test our model's prediction on fund flows in a large sample of mutual funds. Consistent with investors scrutinizing fund holdings for profit opportunities, our data from an internet mutual fund forum reveal increased user posts about a fund's suspended holdings when these holdings have a greater portfolio weight. Controlling for fund performance, we find a strong and robust relationship between fund flows and mispricing due to suspended holdings. Our estimates show that a one-percentage-point underpricing leads to fund inflows amounting to 2%. This finding suggests that some investors purchase and redeem fund shares based on their information about suspended fund holdings.

While we control for a large set of fund and fund family characteristics, our estimation could still suffer from a selection bias if fund-level investor activities and suspended holdings are commonly driven by omitted factors. To address this concern, we exploit regulatory rules imposed on Chinese mutual funds that require six portfolio reports per year, with different timing and scope of disclosure. Thus, only a subset of a fund's holdings are observed by investors at any given point in time. Using the precise dates of disclosed holdings, we compare investor responses to suspended holdings that are observed and unobserved before trading resumes. Our comparison reveals significant differences between observed and unobserved holdings, which supports our interpretation that mispriced fund NAVs attract investor scrutiny and abnormal flows.

Next, we test our model's prediction on information acquisition activities using a sample of suspension events. We use two measures of information acquisition. The first measure is based on institutional investors' corporate visits. In our setting, regulators require Chinese public firms to disclose private meetings between investors and firm insiders. This allows us to observe the institutions that visit a firm during its stock's suspension period. The second measure of information acquisition is the intensity of internet searches, which captures investor demand for firm-specific public information (Drake, Roulstone, and Thornock, 2012). Our empirical strategy compares suspension events by their exposures to mutual funds, proxied by the stock's maximum portfolio weight among all funds, while controlling for the stock's overall mutual fund ownership as well as other firm and event-specific characteristics. To tighten the identification, we also include fixed effects at the time and the firm's industry and headquarters city levels.

Using these two measures, we find that a suspended stock's exposure to mutual funds has a sizable positive impact on investors' information acquisition activities. Our estimates show that, increasing the stock's exposure to mutual funds by 10% attracts 2.2 more institutions to visit the firm during suspensions. Nearly half of the vistor institutions are private funds (e.g., hedge funds), which potentially invest via mutual fund shares. We find a similar positive effect on internet searches. These findings suggest that the exposure to mutual funds induces an increase in investors' acquisition of both private and public information.

Finally, our model predicts that when trading resumes, the incremental information acquired by fund investors will be incorporated into stock prices and make them more informative about fundamentals. We test this prediction using a theory-motivated measure of price informativeness: the magnitude of price movements at resumptions. We find that a stock's exposure to mutual funds is associated with significantly larger price movements when its trading resumes, suggesting that the exposure to mutual funds during the suspension period results in a more informative price. This finding provides further evidence for fund investors' information acquisition.

This paper sheds light on a liquidity channel through which mutual funds affect investor information choices in capital markets. A large theoretical literature models asset managers as delegated information acquirers (e.g., Garcia and Vanden, 2009; Kacperczyk, Van Nieuwerburgh, and Veldkamp, 2016; Gârleanu and Pedersen, 2018). Consistent with this view, the empirical literature has examined portfolio managers' informed investments (e.g., Coval and Moskowitz, 1999, 2001; Cohen, Frazzini, and Malloy, 2008) and how investors react to fund performance (e.g., Chevalier and Ellison, 1997; Sirri and Tufano, 1998). Our study shows that beyond delegated portfolio management, the liquidity created by mutual funds influences investors' money flows and information acquisition activities.

Our insight is related to two papers on fund share redemptions and portfolio adjustments: Gallagher, Schmidt, Timmermann, and Wermers (2018), who document investors' scrutiny of fund-level exposures to the Eurozone crisis, and Di Maggio, Franzoni, Kogan, and Xing (2023), who argue that extreme returns of specific holdings lead to fund outflows. We complement these papers by examining fund investors' acquisition of firm-specific information and both inflows and outflows when funds are unable to adjust the illiquid holdings.

The mechanism of open-end funds has inspired a growing literature on liquidity transformation by nonbank financial intermediaries (Chernenko and Sunderam, 2016; Ma, Xiao, and Zeng, 2022). This literature focuses on liquidity mismatches in funds that hold illiquid asset classes and the resulting market fragility (e.g., Goldstein, Jiang, and Ng, 2017). While our paper studies occasional illiquidity events that turn stocks into perfectly illiquid holdings, our finding that investors acquire information about specific holdings suggests that the information sensitivity of portfolio assets plays an important role in fund runs.

This paper also extends the literature on stale fund net asset values. In existing studies, stale values arising from regional time differences (e.g., Zitzewitz, 2003, 2006; Chalmers, Edelen, and Kadlec, 2001) or illiquid bond portfolios (e.g., Choi, Kronlund, and Oh, 2019; Zhang, Kuong, and O'Donovan, 2023) can be exploited by investors without analyzing specific holdings. In our setting, by contrast, investors need firm-specific information to exploit the stale net asset values. Moreover, our paper extends the literature on stock trading suspensions. Prior studies of this regulatory rule (e.g., Kryzanowski, 1979; Howe and Schlarbaum, 1986; Bhattacharya and Spiegel, 1998; Huang, Shi, Song, and Zhao, 2018) generally focus on its impact on stock trading and returns. Our study adds a new perspective on how this rule affects fund investors and fund flows in modern financial markets.

The rest of the paper proceeds as follows. Section 1 develops a stylized model to formalize intuition and derive predictions. Section 2 introduces our empirical setting and presents basic facts. We then explain methodologies for testing model predictions in Section 3 and discuss our results in Section 4. Section 5 concludes.

1. Theoretical Framework

This section develops a simple model of liquidity-driven information acquisition. Our model endogenizes information acquisition and price informativeness in a rational expectations equilibrium (Grossman and Stiglitz, 1980). Specifically, we construct a partially-revealing equilibrium where asset prices, set by competitive market makers (Kyle 1985), aggregate noisy private signals (Hellwig, 1980). The precision of these signals is chosen by investors as in Verrecchia (1982). We depart from classic models by introducing uncertainty in trading suspensions and by analyzing the impact of liquidity provided by mutual funds.

1.1. Setup

There are three time periods, $t = 0, 1, 2$, and a continuum of price-taking investors, indexed by $i \in [0, 1]$. Each investor has initial wealth W_0 and negative exponential utility $u(W_i) = -e^{-\rho W_i}$ over $t = 2$ wealth W_i. They can always lend and borrow at a zero risk-free rate. There is a risky asset that pays v at $t = 2$. The payoff v is normally distributed with mean v_0 and variance τ_v^{-1}. This asset is potentially illiquid: Investors can trade it at $t = 1$ if its market is open, which occurs exogenously with probability $q \in (0, 1]$. With probability $1 - q$, its trading is suspended, and the asset is completely non-tradable. We denote the tradable and non-tradable states at $t = 1$ with $M \in \{1, 0\}$.

Open-end fund. There exists a mutual fund whose portfolio consists of the asset that will pay v and some other risky assets. The value of fund shares at $t = 2$ will be $v_f = \theta v + (1-\theta)\omega$, where $\theta \in (0, 1)$ is the weight of the risky asset under consideration, and $\omega \sim N(0, \tau_\omega^{-1})$ is an unhedgeable payoff generated by other assets in the portfolio.[1] At $t = 1$, investors may purchase or redeem the fund's shares at a fixed share net asset value (NAV). This NAV depends on the potentially illiquid underlying asset. If the asset is tradable at $t = 1$, the NAV is $p_f = \theta p$. In contrast, if the asset is non-tradable, the NAV will be set at the unconditional expected share value, i.e., $p_f = \theta v_0$.

Information structure. In period $t = 1$, each investor i privately observes a noisy signal about v: $s_i = v + \tau_s^{-1/2}\epsilon_i$, where ϵ_i is standard normal and independent across investors. At $t = 0$, investor i chooses private information about v before knowing the realizations of M and s_i: She chooses a signal precision τ_s by incurring a non-pecuniary cost $c(\tau_s)$, where c is continuously differentiable, strictly increasing, strictly convex and satisfies $c'(0) = 0$. Random variables $v, \omega, u, \epsilon_i, M$ are mutually independent. Investor preferences, market structure, and all distributions are common knowledge among market participants.

Trading. If the market for the risky asset is open at $t = 1$, each investor chooses a demand schedule $x_i(s_i, p)$ that buys x_i shares of the risky asset at price p. Meanwhile, a unit mass of noise traders submit net demand $u \sim N(0, \tau_u^{-1})$. A competitive fringe of risk-neutral market makers observe aggregate demand schedule $X(p) = \int_0^1 x_i(s_i, p)\,\mathrm{d}i + u$ and set price as $p = \mathbb{E}[v|X(\cdot)]$. We assume that θ is relatively small, hence whenever possible, investors will directly trade the risky asset. If the trading of the asset is suspended at $t = 1$, then each investor can choose to hold y_i units of fund shares.

[1] For simplicity, our model abstracts away the dilution or concentration effects of flows on the value of fund shares because the size of informed flows is small relative to the fund's size.

Equilibrium. We focus on a symmetric linear equilibrium, which is characterized by (i) an asset demand schedule $x(s_i, p)$ that, given p, maximizes investor i's $t = 1$ expected utility $V(s_i, p) = \max_{x_i} \mathbb{E}[u(W_i)|s_i, p, M = 1]$ when the market is open, (ii) a fund share demand schedule $y(s_i)$ that maximizes investor i's $t = 1$ expected utility $V_f(s_i) = \max_{y_i} \mathbb{E}[u(W_i)|s_i, M = 0]$ from investing through the fund, (iii) an information choice τ_s that maximizes investor ex-ante expected utility $\Pi(\tau_s) = q\mathbb{E}[V(s_i, p)] + (1 - q)\mathbb{E}[V_f(s_i)] - c(\tau_s)$, and (iv) a price function

$$p = p_0 + \gamma(v - v_0) + \lambda u, \tag{1}$$

where p_0, γ, λ are endogenous coefficients determined by Bertrand competition among risk-neutral market makers. We define price informativeness as $\Phi = Var[v|p]^{-1} - \tau_v$, which is the amount of information about v that can be inferred from price p.

1.2. NAV Mispricing and Fund Flows

To analyze the mispricind fund NAVs when the underlying asset is non-tradable, we begin with the equilibrium price p that clears the market when the asset is tradable at $t = 1$.

Lemma 1. *For any given τ_s, there exists a unique linear asset market equilibrium at $t = 1$: if the market opens, investor i submits demand*

$$x(s_i, p) = \frac{\tau_s}{\rho}(s_i - p), \tag{2}$$

and the informativeness of asset price p satisfies $\Phi = \frac{\tau_s^2 \tau_u}{\rho^2}$ and

$$Var[p - v_0] = \frac{1}{\tau_v} - \frac{1}{\Phi + \tau_v}. \tag{3}$$

Equation (2) shows that, while equilibrium price p conveys information about v beyond signal s_i, investor demand for the risky asset only depends on the difference between the realized signal s_i and the price p. Intuitively, investors trade on private signals more aggressively if their signals are more precise. The equilibrium price will be more informative about v if investors receive more precise signals. Equation (3) links two endogenous variables, showing that the magnitude of price movement at $t = 1$ is strictly increasing in Φ. We will develop an empirical measure of price informativeness based on this linktage.

It is worth noting that if the underlying asset is non-tradable at $t = 1$, the fund shares are mispriced by $\theta(p - v_0)$, where p is the fair value of the illiquid asset, namely, the market price if it were normally traded. Our first proposition describes how this NAV mispricing is related to investors' choices of investing in fund shares.

Proposition 1. *When the underlying asset is non-tradable, investment in the fund is positively correlated with the mispricing of the fund NAV:* $Cov[\int_0^1 y_i \, \mathrm{d}i, \theta(p - v_0)] > 0$.

The investor's demand for fund shares y_i and asset trading choice x_i are commonly driven by her private signal s_i. Since s_i is an unbiased signal of the asset's payoff v, overall investors will purchase more fund shares when v is greater and vice versa. When v is greater, if the asset is tradable, its price p also tends to be higher, and hence if the asset is non-tradable, fund shares tend to be more undervalued. As such, there is a positive association between fund share undervaluation and informed investment in fund shares.

1.3. Fund Portfolio Weight and Investor Information Choices

When choosing information in period $t = 0$, investors face a tradeoff between the value of private signals and the cost of signal precision. Private information is less valuable if price p, a public signal, is more informative about payoff v. So investors will choose a lower signal precision if they anticipate a more informative price when the asset is tradable at $t = 1$. Meanwhile, because investors can invest via fund shares at a fixed NAV when the underlying asset is non-tradable, the value of private information also depends on the asset's exposure to the fund. In particular, when portfolio weight θ is greater, investors get less unwanted exposure to risks due to other assets in the fund portfolio, which allows them to make larger informed bets at a given level of risk.

The informativeness of price p and the asset's weight in fund portfolio θ jointly determine the marginal value of information. The investor's optimal information choice at $t = 0$ equalizes this marginal value and the marginal cost and in turn, affects price informativeness at $t = 1$. In equilibrium, the signal precision at $t = 0$ results in a price informativeness at which every investor's choice is indeed optimal. The lemma below characterizes this equilibrium.

Lemma 2. *There exists a unique equilibrium at $t = 0$. The investor's optimal information choice τ_s is characterized by*

$$q \cdot \psi(\tau_s) + (1 - q)\varphi(\tau_s, \theta) = c'(\tau_s), \tag{4}$$

where $\psi : \mathbb{R}_+ \mapsto \mathbb{R}_{++}$ and $\varphi : \mathbb{R}_+ \times (0, 1) \mapsto \mathbb{R}_{++}$ are both continuously differentiable and strictly decreasing in τ_s, and φ is strictly increasing in θ.

Lemma 2 provides comparative statics with respect to θ. On the one hand, a greater θ raises φ due to the opportunity of investing via fund shares when the underlying asset is non-tradable. On the other hand, φ is still decreasing in τ_s due to investors' aversion to residual uncertainty in the value of fund shares. Given that the left hand side of (4) decreases in τ_s and that c' is strictly increasing, the equation implies that equilibrium signal precision is increasing in θ. This in turn leads to a more informative asset price when trading occurs.

Proposition 2. *In equilibrium, the signal precision τ_s and the price informativeness Φ are both increasing in θ.*

Proposition 2 states that when the risky asset has a greater weight in the fund portfolio, investors will acquire better information ex ante. Moreover, when the asset turns out tradable at $t = 1$, its price will be more informative as investors will trade on more precise signals.

1.4. Testable Predictions

Our model yields two empirical predictions:

Prediction 1. *At the fund level, flows are positively associated with the mispricing of fund NAVs caused by illiquid portfolio holdings.*

Prediction 2. *At the asset level, an illiquid asset's exposure to mutual funds leads investors to acquire more information about about the asset and makes its price more informative.*

2. Empirical Setting

We use the Chinese stock market as an empirical setting to test our predictions. This setting presents several features. First, many stocks experienced prolonged periods of trading suspensions, during which a stock becomes perfectly illiquid. Second, while suspended stocks cannot trade, they may be held by mutual funds, sometimes with significant portfolio weights. Third, stock prices exhibit large movements at trading resumptions, suggesting mispricing in fund NAVs and profit opportunities. Finally, for institutional reasons, a stock's exposure to mutual funds is better observed by researchers than by investors, which helps disentangle different explanations.

2.1. Institutional Background

Trading Suspensions. For many years, trading suspensions have been a regular phenomenon in the Chinese stock market. The two exchanges, Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE), both require publicly listed firms to suspend trading before major corporate events (e.g., acquisitions/sales of assets, mergers, and restructurings).[2] At the planning stage of these events, firms must apply to the exchange for a trading suspension. When suspended, firms should announce the progress of their events and the planned dates of trading resumptions. The suspension period is, in principle, limited to no

[2]For example, both exchanges released guidance on stock trading suspension in their 2012 rules about the supervision of corporate reorganizations.

longer than three months.[3]

In practice, the suspension rules were not subject to stringent regulatory oversight or legal enforcement. As a result, many firms suspended for periods exceeding three months or even multiple years. This causes a significant fraction of publicly listed firms to be not traded for prolonged periods of time. Between 2004–2020, 78.5% of stocks listed on the two exchanges were suspended at least once, and in total, 4.6% of stock-trading day pairs were in suspension. Since these stocks cannot be traded on the exchanges during suspensions, the liquidity of the stocks is completely eliminated.[4]

Figure 1 summarizes suspension events. The annual event count typically falls between 500 and 2,000, with considerable variation across years and notably high occurrences in 2006 and 2015. On average, suspensions last between 20 and 40 trading days. Such prevalent suspensions did not receive much regulatory intervention until November 2018, when the China Securities Regulatory Commission (CSRC) implemented new guidelines to limit the scope and length of stock trading suspensions. After 2018, suspension events became less frequent and shorter in duration.

Mutual Funds. According to the Asset Management Association of China, there were 6,770 open-end mutual funds by December 2020. Among them, 1,362 are equity funds and 3,195 are mixed funds, with 2.06 and 4.36 trillion CNY total net assets (approximately 317 and 670 billion USD), respectively. In China, retail investors and non-financial entities (corporations, organizations, and government agencies) are the main shareholders of public firms. Despite years of growth, the share of stocks held by Chinese mutual funds decreased since its historical peak of 25% in 2007. In 2020, mutual funds held only 7.3% of the 64.2 trillion CNY (9.9 trillion USD) total market capitalization of tradable shares.

Since 2004, the CSRC has required mutual funds to publicly disclose portfolio holdings.

[3]See Huang, Shi, Song, and Zhao (2018) for a more detailed discussion on trade suspensions.
[4]The two stock exchanges do not allow any off-exchange block trades during the trading suspension period.

Regulatory rules mandate six filings per year, including four quarterly reports, one semiannual report, and one annual report. Mutual funds must file the quarterly reports within 15 business days after the end of the most recent quarter. These reports disclose only the top-ten stock holdings in the fund portfolios. By contrast, complete portfolio snapshots as of the end of June and December are disclosed in the semiannual and annual reports. These semiannual and annual reports must be filed within 60 and 90 calendar days, respectively.

The CSRC requires mutual funds to hold no more than 10% of portfolio weight in any single stock. When a stock is suspended from trading, the stock's price becomes stale. To determine the valuations of suspended stocks in mutual fund portfolios, the CSRC suggested several methods, such as adjusting prices based on market returns. However, whether fund share prices accurately reflect stock fair values is an empirical question.

2.2. Data

Our study relies on several data sources. We use the China Stock Market & Accounting Research (CSMAR) database as the primary data source for stocks, public firms, and mutual funds. We collect thread posts on EastMoney's fund section, an online forum where Chinese investors discuss mutual funds. We also obtain data on corporate visits by institutional investors and internet searches of individual stocks.

We begin with all 4,365 A-Share stocks ever listed on the main board of the SSE and the main board, the Growth Enterprise Market (GEM) board, and the Small/Medium Enterprise (SME) board of the SZSE between 2004–2020. We select stock trading suspension events between 2004–2020 that last for multiple trading days. There are 16,958 events. The duration of suspensions ranges between two and 1,679 trading days, with an average of 28.0 and a standard deviation of 59.5 trading days. We also extract the content of public announcements made during the suspension period and use OpenAI's GPT–3.5–turbo Large Language Model to process the textual information.

We use data on open-end mutual funds that ever existed between 2004–2020 from CSMAR. Our sample includes equity, bond, and mixed funds (CategoryID="S0601","S0602", or "S0604") and excludes money market funds, exchange-traded funds, funds of funds, listed open-end funds, and structured funds.[5] This filter yields 2,881 funds. Our fund stock holdings data include top-ten holdings from quarterly reports and complete portfolio holdings from semiannual and annual reports. We obtain the number of shares and the weight of a stock in a fund's portfolio, as well as the precise date when the stock holding is disclosed to investors. After restricting our sample to fund-stock pairs between 2004–2020, there are 0.43 million and 1.14 million records of top-ten and non-top-ten stock holdings, respectively.

Our data from EastMoney's mutual fund section consist of detailed information extracted from user thread posts. Every post is associated with a unique fund identifier that can be linked to the fund in CSMAR. This feature allows us to measure investor attention on suspended fund stock holdings. Specifically, we identify a post as related to suspended portfolio holdings based on the title and content of the post.[6] In total, users made 6,767 such posts about 1,378 funds between July 2017 and December 2020. These posts were read 15.4 million times, liked 13,915 times, and received 8,583 user replies. Each post also includes a score for the author's community impact, which ranges between one and ten.

Our setting provides a unique measure of institutional investors' acquisition of private information. Since 2006, the SZSE implemented the CSRC's Fair Disclosure regulation and mandates that firms publicly disclose their private meetings with investors. Using this data source, we observe 128,219 private meetings between 2012–2020, involving 1.03 million institutional visitors. We classify a visitor institution as a "private fund" if it is an asset manager that does not manage mutual funds, venture capital, or insurance assets. To measure

[5]We exclude ETFs because of a lack of data on their highly diversified portfolios, and their share prices often exhibit large deviations from NAVs. Listed open-end funds are open-end funds whose shares are also traded on exchanges, and structured funds are leveraged funds that issue both risky and safe share classes.

[6]We use keywords "suspend", "resume", "suspension", and "resumption" to filter for posts related to suspended portfolio holdings.

investors' acquisition of public information, we obtain data on firm-level internet searches through Baidu, the dominant search engine in the Chinese market. This dataset, collected from the Baidu Index Platform, provides weekly indexes that capture the intensity of user searches from computers (PCs) between 2006–2020 and mobile devices between 2011–2020.

We measure earnings surprises using quarterly earnings per share (EPS) and apply a seasonal random-walk model that is standard in the accounting literature (Bernard and Thomas, 1990).[7] Specifically, we compute unexpected earnings (UE_t) as the difference between the quarter's actual EPS and the EPS of the same quarter in the previous year. We then compute standardized unexpected earnings (SUE_t), which are UE_t scaled by their standard deviation over the past four to eight quarters.

2.3. Measuring Returns

Measuring stock returns at trading resumptions is important to our empirical exercise. We define *ResmRet* as the raw return that is realized at the end of a suspension event. To calculate this variable, a caveat is that many stocks face a 10% (or 5%, for stocks with a special treatment status) daily price limit, which may constrain the immediate price movements at resumptions. We carefully track the number of consecutive trading days that stock price hits daily price limits after resumption. Figure IA.1 in the Internet Appendix summarizes this number. While the CSRC exempts price limits on the first trading day for suspensions related to certain corporate events, prices in about 45% of the events still hit the limit on the day of resumption.

For these events, we set *ResmRet* to be the cumulative return between the resumption day and the day the stock stops hitting price limits, which we refer to as the "release day".

To capture firm-specific price movements at resumptions, we compute abnormal returns

[7] In the Chinese market, analyst forecasts for quarterly earnings are unavailable. The literature shows that earnings expectations of investors who lack access to analysts forecasts resemble the seasonal random-walk model (Bhattacharya, 2001; Battalio and Mendenhall, 2005; Ayers, Li, and Yeung, 2011)

with a market model, using the Shanghai-Shenzhen A-Share Index return (MarketType ="53") as the market return and the one-year bank deposit rate as the risk-free rate. We first estimate the stock's beta with 250 daily returns before a suspension event. We then match each event with market return, $MktRet$, and risk-free return, Rf, between the suspension day and the resumption day (or release day) and define the event's abnormal return at resumption as $ResmAR = (ResmRet - Rf) - \beta(MktRet - Rf)$.

For mutual funds, we carefully adjust daily NAVs for dividend payouts and share splits before computing daily NAV raw returns. Similar to stocks, we compute daily NAV abnormal returns using 250 daily returns. Since funds in our sample includes mixed funds, we estimate betas with a two-factor model, based on the Shanghai-Shenzhen A-Share Index and Shanghai Corporate Bond Index as stock and bond market returns.

2.4. Empirical Facts

Next, we establish several empirical facts that are important for testing our model's predictions.

2.4.1. Stock Price Movements at Resumption

When trading is suspended, new information cannot be incorporated into stock prices. Once trading resumes, the accumulated information will be reflected, giving rise to large stock price movements. Figure 2 summarizes these price movements. Panel (a) reports the distribution of $ResmRet$, which is largely symmetrically distributed around zero and highly volatile, exhibiting fat tails: 785 (3,454) suspension events end up with returns whose magnitude exceed 50% (20%). Panel (b) replaces the variable with $ResmAR$, which is adjusted for market returns during the suspension period. The distribution remains similar. Indeed, the two return measures have standard deviations 48% and 42%, respectively, which implies that stock price movements at resumptions are primarily driven by firm-specific information.

2.4.2. Predictability of Stock Price Movements

Stock price movements at resumptions can be predicted by variables observed before the resumption. To show this, we estimate regressions of *ResmRet* on $MkrRet$ and firm-specific news measured during suspensions. Table 1 reports our estimation results. Column (1) of Panel A shows that the market return during the suspension period predicts the resumption return with a 34% R^2. Columns (2)-(3) replace the market return with size-decile portfolio return and cumulative earnings surprises during the suspension period, respectively. The size portfolio increases the R^2 to 45%. The earnings surprises, which capture some of the firm-specific news, also positively predict *ResmRet*, but the R^2 is small. In column (4), we include both of these regressors and find similar coefficients.

During the suspension period, an important source of firm-specific information is the firm's public announcements. We collect and use AI to process the content of these announcements, converting the textual information to a trading signal taking a value of -1, 0, or 1.[8] In column (1) of Panel B, we find that this signal positively predicts a 6.0 percentage point difference in resumption return. The R^2 of this regression is a modest 0.3%, suggesting that without knowing historical context and market expectations, our AI model's ability to extract information from announcements is limited. After including market or size portfolio returns and earnings surprises in columns (2)–(4), the predictive power of our AI signal remains sizable and significant.

2.4.3. Suspended Stocks in Fund Portfolios

For mutual fund investors to profit from suspended stocks' predictable price movements, there are three necessary conditions. First, the weight of suspended stocks in fund portfolios should be sizable. Second, investors should be able to observe suspended holdings before their trading resumes. Third, NAVs at which investors purchase and redeem fund shares

[8]We explain this step in detail in Section IA.2 of the Internet Appendix.

should be mispriced due to the stale prices of suspended holdings.

Figure 3 presents fund portfolio weights of suspended stocks, measured at the quarter-end before resumption. Since small positions are unlikely relevant, we exclude holdings with portfolio weights below 1%. We divide suspended holdings into two groups, depending on whether the holdings are disclosed, and thus observed by investors, before trading resumes. There are 6,518 cases with observed and 9,547 cases with unobserved holdings records. Many holdings have substantial portfolio weights. The median weight is 3.4% (2.3%) for observed (unobserved) holdings. On the right tail, more than 10% of observed (unobserved) holdings have weights exceeding 6.0% (5.4%). These large portfolio weights provide meaningful exposures to the suspended stocks.

To investigate whether mutual funds accurately price NAVs based on the fair values of suspended holdings, Figure 4 presents the relation between fund NAV returns and suspended holdings' weight-implied impact on NAVs (i.e., the product of portfolio weight and *ResmRet*).[9] If funds accurately adjust NAVs before resumptions, these two returns should be uncorrelated, as any information during suspensions would be already reflected in NAVs.[10] In sharp contrast, we document a strong positive correlation between these two returns, with a slope very close to one. This implies that overall, funds fail to adjust for stale stock prices and that investors may potentially profit by exploiting mispriced NAVs.

3. Methodology

We test our model predictions within the empirical setting introduced in the last section.

[9]For example, if the portfolio weight of a suspended stock is 5%, and its *ResmRet* is 20%, then the weight-implied impact on fund NAV is $5\% \times 20\% = 1\%$. NAV returns are measured over the same time window of *ResmRet*.

[10]Internet Appendix IA.3 provides further evidence that while some funds adjust the valuation of long-term suspended holdings, their adjustment is based on only market returns.

3.1. Prediction 1: Fund-Level Analysis

To test Prediction 1, we construct fund-level samples and estimate how investors respond to suspended holdings. Our empirical strategy captures investor responses by comparing suspended holdings that are observed and unobserved by investors before their trading resumes.[11] The visibility of a specific holding is determined by the timing of the fund's portfolio disclosure, and Figure IA.2 in the Internext Appendix shows that the two groups of holdings have a similar impact on fund NAVs. This strategy addresses the concern that investor activities and suspended holdings are commonly driven by omitted fund heterogeneities, as such biases would generate similar spurious "responses" to unobserved holdings.

Our fund-level analysis consists of two parts. We first examine whether investors scrutinize suspended stock holdings in a fund–day panel sample. We use data from an internet forum, EastMoney's fund section, and regress fund-level investor activity measures on the weight of suspended stocks in the fund's portfolio:

$$Activity_{f,t} = \beta \times SuspWgt_{f,t} + \delta_f + \delta_t + \epsilon_{f,t}. \tag{5}$$

$SuspWgt_{f,t}$ is fund f's total suspended portfolio weight on a given calendar day t. For each f and t, we calculate suspended weights that are observed and unobserved by investors based on portfolio snapshots that are already disclosed and not yet disclosed. We estimate β using within-fund variation in $SuspWgt_{f,t}$ and also include daily fixed effects to account for changes in overall suspensions and forum activities over time.

The second part of our analysis investigates how fund flows respond to mispriced NAVs caused by suspended holdings. As standard in the literature, we calculate net flows into a fund as

$$Flow_{f,t} = \frac{TNA_{f,t} - TNA_{f,t-1} \times (1 + r_{f,t})}{TNA_{f,t-1} \times (1 + r_{f,t})}, \tag{6}$$

where $TNA_{f,t}$ is the total net assets of fund f at the end of quarter t, and $r_{f,t}$ is the fund's

[11] The details of sample construction can be found in Internet Appendix Section IA.4.

return from the end of quarter $t-1$ to the end of quarter t. To mitigate the influence of outliers, we winsorize the flows at the 2.5 and the 97.5 percentiles.

We estimate a flow regression using a fund-quarter panel sample:

$$Flow_{f,t} = \beta \times Mispricing_{f,t} + \Gamma' Control_{f,t} + \delta_t + \epsilon_{f,t}, \tag{7}$$

where $Mispricing_{f,t}$ is fund f's NAV mispricing in quarter t. We calculate NAV mispricing as the product of a suspended stock's portfolio weight in fund f in quarter t and its price movement at resumption (*ResmRet* or *ResmAR*) in quarter $t+1$. Hence, this measure uses stock price movements realized at resumptions as a proxy for the mispricing of a suspended holding.[12] If more than one suspended holding will resume trading in the next quarter, we aggregate the mispricing to the fund level.

To implement our empirical strategy, we calculate two versions of NAV mispricing based on suspended holdings that are observed and unobserved by investors at the end of the quarter of flow measurement. Our specifications control for lagged fund performance, measured as quarterly abnormal NAV returns, as well as other fund-level and fund family-level characteristics. We also include quarter fixed effects, thereby estimating β using variation in NAV mispricing across funds within the same quarter.

3.2. Prediction 2: Event-Level Analysis

To test Prediction 2, we construct an event-level sample and estimate how a suspended stock's exposure to mutual funds affects investor information acquisition during suspensions and stock price informativeness at resumptions.

We use two measures of information acquisition. First, we measure the acquisition of private information about a firm based on institutional investors' corporate visits during the suspension period. Second, we measure overall investors' acquisition of public information

[12] To ensure that the flows are driven by information before the resumptions, we construct this sample using events for which the suspension and resumption dates are in different quarters.

about a firm with internet searches during the suspension period.[13] These two measures offer complementary insights into investors' demand for firm-specific information.

The key measure of our second outcome variable, price informativeness, is motivated by theory. In our model, price informativeness is defined as $\Phi = Var[v|p]^{-1} - \tau_v$, in which conditional variance $Var[v|p]$ is hard to measure empirically. However, Lemma 1 shows that given τ_v, $Var[p - v_0]$ is strictly increasing in Φ. This monotone relationship implies an unconditional measure: at the resumption, stock price will move more when there is more information about firm fundamentals. Hence, we measure price informativeness at resumptions using $|ResmAR|$, the absolute value of firm-specific price movement.[14]

Our tests also require us to measure a suspended stock's exposure to mutual funds. While the stock may be held by multiple funds during its suspension period, we argue that investors exploiting mispriced NAVs likely purchase and redeem only the shares of funds with larger portfolio weights in the stock. Following this intuition, we measure the economical significance of a stock's exposure to mutual funds by focusing on the largest weight across all funds.[15] Specifcally, we test Prediction 2 by estimating regression

$$Outcome_{i,t} = \beta \times MaxWgt_{i,t} + \Gamma' Control_{i,t} + \delta_{ind} + \delta_t + \epsilon_{i,t}, \tag{8}$$

where $MaxWgt_{i,t}$ is the maximum weight of stock i across all fund portfolios, as observed by investors before trading resumption during quarter t. $Outcome_{i,t}$ is a measure of information acquisition, or price informativeness. We include industry fixed effects and quarter fixed effects (and headquarters city fixed effects for corporate visits) to account for the impact of industry and time differences on our estimation.

A concern for this test is that, our variable of interest, $MaxWgt_{i,t}$, is a function of fund

[13]Internet searches decline substantially during a firm's suspension period (see Internet Appendix IA.5). Our test compares searches during the suspension period between events.

[14]The uncertainty in fundamentals (τ_v in the model) differ across suspension events. To account for this, we control for $\sigma(AR)$, i.e., the standard deviation of daily abnormal returns over five subsequent trading days.

[15]To mitigate the influence of very small funds, we require fund size to be at least 100 million CNY to be considered in all of our testing samples.

portfolio choices, which could be determined by variables that correlate with the event-level outcomes.[16] To mitigate this concern, our specifications control for the fractions of the firm owned by all mutual funds and other institutional investors, firm characteristics (e.g., size, book-to-market, number of shareholders) and event characteristics (e.g., the duration of suspension) in quarter t. Our identifying assumption is that given the control variables, suspension events with the same mutual fund and institutional ownership would have similar information acquisition activities and price informativeness in the absence of particular funds that have significant portfolio weights.

Lastly, we apply an alternative approach of examining stock price informativeness that is common in the literature. That is, we estimate the sensitivity of the firm's cash flows to stock price movements at resumption with an interaction specification:

$$\begin{aligned} SUE_{i,t+1} = \beta_1 \times MaxWgt_{i,t} \times PriveMove_{i,t} + \beta_2 \times PriveMove_{i,t} \\ + \beta_3 \times MaxWgt_{i,t} + \Gamma' Controls_{i,t} + \delta_{ind} + \delta_t + \epsilon_{i,t} \end{aligned} \tag{9}$$

where $SUE_{i,t+1}$ is firm i's earnings surprise announced in quarter $t+1$. Suppose a stock's exposure to mutual funds during a suspension does not change price informativeness, then $MaxWgt$ would be unrelated to the sensitivity: that is, β_1 would be zero. Instead, if stock price movements become more informative about firm cash flows due to its exposure to mutual funds, we would expect β_1 to be positive.

4. Results

This section presents our main empirical results testing the model's predictions.

[16]Our event-level regressions do not use unobserved exposures to mutual funds. This is because variation in unobserved exposures diminishes towards zero for long-lasting, impactful events, resulting in uninformative estimates for the coefficient. Figure IA.3 in the Internet Appendix illustrates this issue.

4.1. Investors' Scrutiny of Suspended Holdings

Our first test examines whether investors scrutinize suspended fund holdings, a necessary condition for the existence of any flow responses. Panel A of Table 2 presents summary statistics for investor activities in the internet mutual fund forum. In this fund–day panel sample, suspended fund weights are often substantial. There are large numbers of days when the fund has a sizable $SuspWgt$, for holdings that observed and unobserved by investors on the day. Thread posts about suspended holdings are much less frequent: After all, not all investors use this forum, and only a subset of users would post their findings.

Table 3 reports our estimation results of equation (5). In Panel A, we use the suspended portfolio weight as a continuous regressor. The point estimate in column (1) indicates that, every one percentage-point increase in the observed suspended portfolio weight is associated with a 0.03 standard deviation increase in daily suspension-related thread posts about the fund (i.e., $0.123 \times 0.01/0.039$). Columns (2)–(4) replace the dependent variable with the number of user replies, the impact score, and the number of likes, and get qualitatively similar estimates. By contrast, the coefficients on the unobserved suspended portfolio weight are statistically indistinguishable from zero. Our F-tests in the last row largely reject the null hypothesis that the coefficients of observed and unobserved suspended weights are the same.

Panel B further quantifies investor activities by replacing the regressors with dummy variables indicating whether the suspended portfolio weight is below 5%, between 5%–10%, and above 10%. The magnitude of effects monotonically increases in suspended weights. For fund–day pairs with observed suspended weights exceeding 10%, the new posts about the fund are 20 times as many as pairs for which the weights are less than 5%. On average, these posts receive 22 times more replies, are written by posters with 20 times higher impact scores, and get 8 times more like clicks. No effect was found for indicator variables corresponding to unobserved holdings. Taken together, these results indicate that investors do examine suspended stocks held by mutual funds based on currently disclosed portfolio snapshots.

4.2. Fund Flows Respond to Mispriced NAVs

Investors who scrutinize suspended holdings might purchase and redeem fund shares based on firm-specific information. This implies a relationship between fund flows and NAV mispricing, as formalized by our model's Prediction 1. We test this prediction by estimating equation (7).

Table 4 reports our estimation results. In column (1), our estimate for the coefficient of NAV mispricing, as observed by investors, is positive and statistically significant. This point estimate indicates that, controlling for fund performance, a one-percentage-point NAV underpricing attracts 1.7% more money flows into the fund. In contrast, the estimate for the coefficient of unobserved NAV mispricing is negative and statistically insignificant. In column (2), these estimates remain similar after adding control variables at the fund and fund family levels. In columns (3)-(4), we measure NAV mispricing based on *ResmAR*, instead of *ResmRet*. We find qualitatively similar estimates with a larger magnitude. Across the specifications, our F-tests reject the null hypothesis $\beta^{obs} = \beta^{ubs}$. This further supports our interpretation that fund flows respond to investors' information about suspended stocks in observed fund portfolios.

4.3. Increases in Information Acquisition Activities

The existence of flow responses to mispriced NAVs implies that investors have firm-specific information about suspended stocks. Is this information serendipitous, or is it actively acquired during the suspension period? Our model predicts that investors acquire more information about a suspended stock if it has a greater exposure to mutual funds during its suspension. We test this prediction by estimating equation (8), using our two measures of firm-specific information acquisition.

Table 5 reports our estimation results for the effect of a stock's exposure to mutual funds on investor corporate visits during suspensions. The dependent variable in columns (1)-(2) is the number of visits by all institutional investors. Our estimates indicate that controlling for firm ownership by mutual funds and other institutional investors, a large exposure to a specific fund significantly increases the frequency of investor visits. On average, a 10% increase in the stock's maximum fund portfolio weight attracts 2.2 more visits, or 21% of a standard deviation. Columns (3)-(4) replace the dependent variable with the number of visits by private funds, including hedge funds and other institutions that are more likely to invest via mutual funds. Our estimates indicate that a 10% increase in the stock's maximum fund portfolio weight attracts 0.9 more visits, or 23% of a standard deviation.

Table 6 reports our results of estimating the same equation while replacing the measure of information acquisition with the natural log of internet search indexes during suspensions. In columns (1)-(2), the dependent variable is based on searches from PCs. Our estimates indicate that the exposure to mutual funds has a positive and significant effect on internet searches. The point estimate suggests that, a one-percentage-point increase in the stock's maximum fund portfolio weight leads to a nearly one percent increase in internet searches about the firm. In columns (3)-(4), the dependent variable is based on searches from mobile devices. We find positive and marginally significant estimates for the effect of the stock's maximum fund portfolio weight.[17]

4.4. Informativeness of Stock Price Movements at Resumptions

Our model's Prediction 2 implies that the increased information acquisition activities during suspensions lead to more informative stock prices at trading resumptions. Now we test this prediction by regressing $|ResmRet|$, the magnitude of price movement at resumption, on $MaxWgt$, the stock's maximum fund portfolio weight. Table 7 reports our estimation results. In columns (1)-(2), the sample includes all suspension events. Our estimates show a positive and significant relationship between a stock's exposure to mutual funds and the magnitude of

[17] Our finding of a stronger effect on internet searches from PCs could be because sophisticated investors, such as hedge funds, tend to work with PCs rather than mobile devices.

its price movement at resumption. On average, a 10% incremental exposure leads to around 5% larger price movement after controlling for post-resumption volatility, the firm's fund and institutional ownership, and other variables.

A threat to the validity of this test is the presence of daily price limits. When these limits are imposed, the supposedly immediate price movement may take multiple days to fully materialize, and we cannot claim that the price movement reflects information acquired during the suspension period.[18] To address this concern, in columns (3)-(4) we use a subsample of events in which price movements at resumptions are not affected by price limits - the *ResmRet* is realized on first trading day. We find that among these events, the estimated effect is stronger: a 10% incremental exposure to mutual funds during suspensions leads to a 13% larger immediate price movement at resumptions. Overall, our results are consistent with our model's prediction on the informativeness of price movements at resumtpions.

Finally, Table 8 reports our estimation results of the interaction specification (9). If stock price movements at resumption are sensitive to firm fundamentals, a positive β_2 will capture this sensitivity. Our results suggest that these price movements are more sensitive to future earnings surprises if the stocks have larger exposures to mutual funds during suspensions. Across columns (1)–(4), the point estimates $\hat{\beta}_1$s are positive and statistically significant, which indicates that a larger exposure to mutual funds is associated with a more informative stock price movement after trading resumes. This result corroborates our previous evidence on stock price informativeness.

5. Conclusion

This paper explores a liquidity channel through which mutual funds affect investors' information acquisition activities. In recent decades, mutual funds have been increasingly investing

[18]Existing research shows that stocks hitting price limits experience heightened investor attention (Seasholes and Wu, 2007) and price manipulation by large traders (Chen et al., 2019).

in illiquid assets while allowing investors to purchase and redeem fund shares on a daily basis. We argue that this liquidity creation facilitates informed investment in illiquid assets, which in turn induces investors to acquire firm-specific information. We derive this insight in a rational-expectations theoretical framework and test our predictions in a unique empirical setting where a significant number of Chinese stocks become perfectly illiquid during trading suspensions. Our findings demonstrate that a stock's exposure to mutual funds significantly increases information acquisition activities. The firm-specific information investors acquire is reflected in the flows to funds with suspended holdings and the informativeness of stock price movements at trading resumptions.

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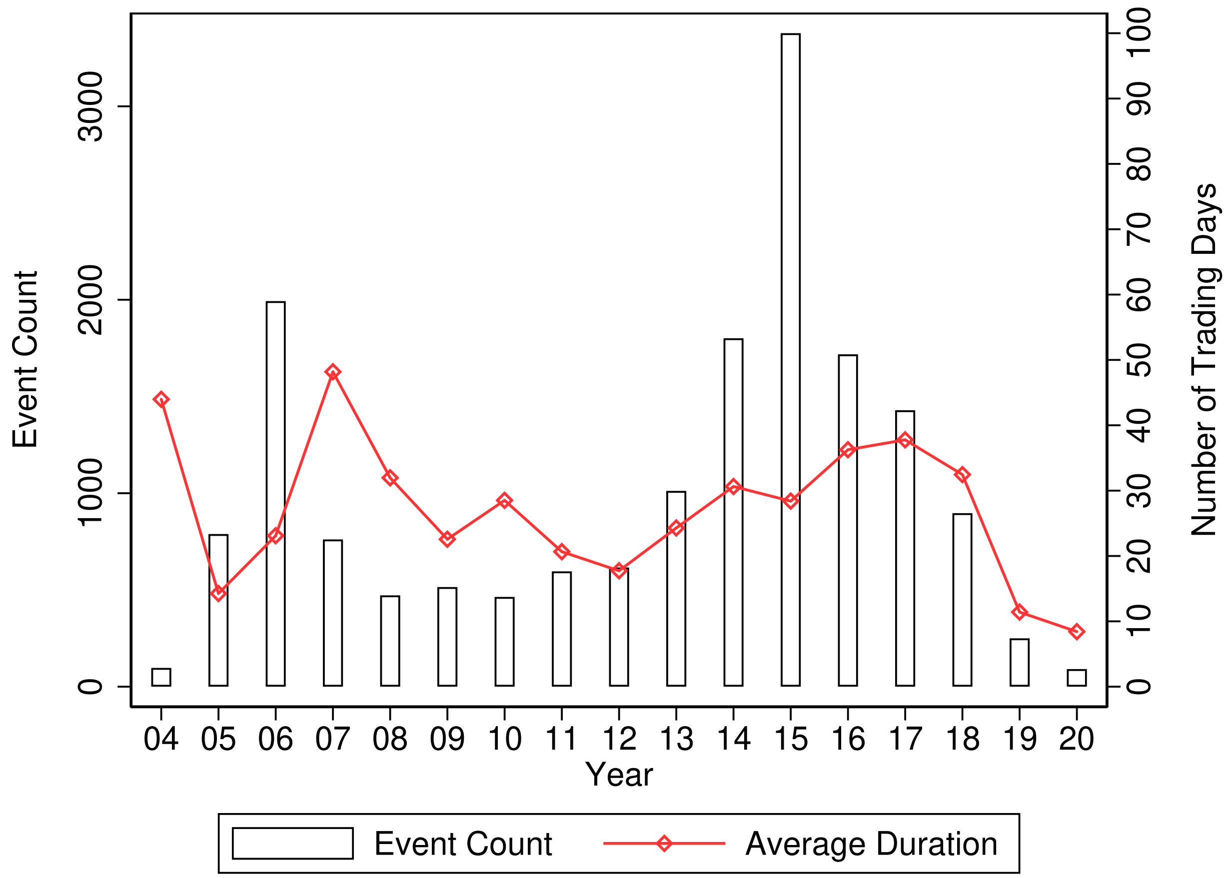
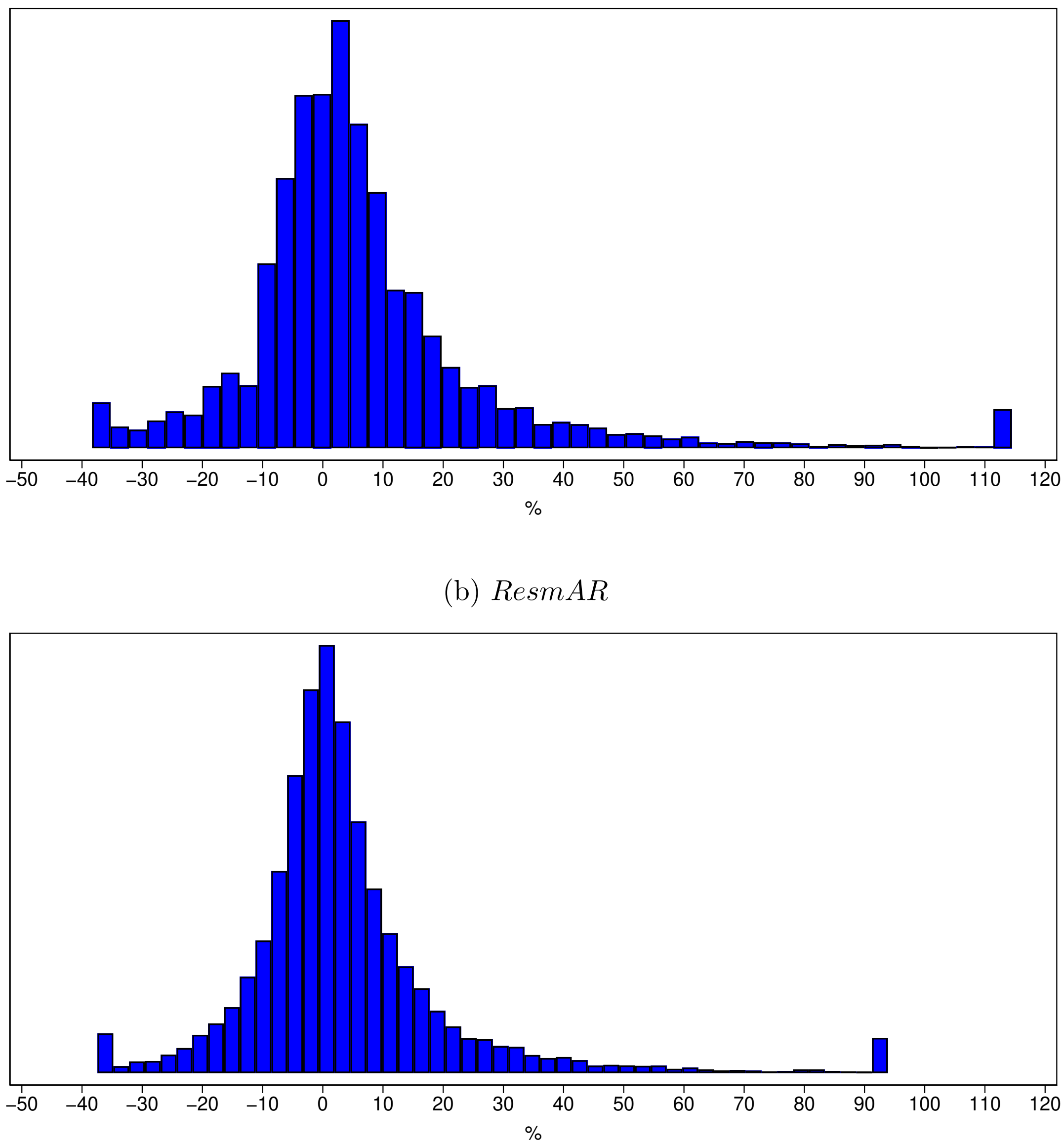


Figure 1: **Stock Trading Suspension Events, 2004–2020.**
This figure plots annual number of stock trading suspension events and average event duration, measured in trading days.

(a) *ResmRet*



(b) *ResmAR*

Figure 2: **Stock Price Movements At Trading Resumptions.**
This figure summarizes stock price movements at resumptions, winsorized at the 1st and 99th percentiles. Panel (a) is a histogram of raw returns realized when stock trading resumes. Panel (b) is a histogram of abnormal returns at resumptions, measured as risk-adjusted returns that adjust for market returns between suspension and resumption dates.

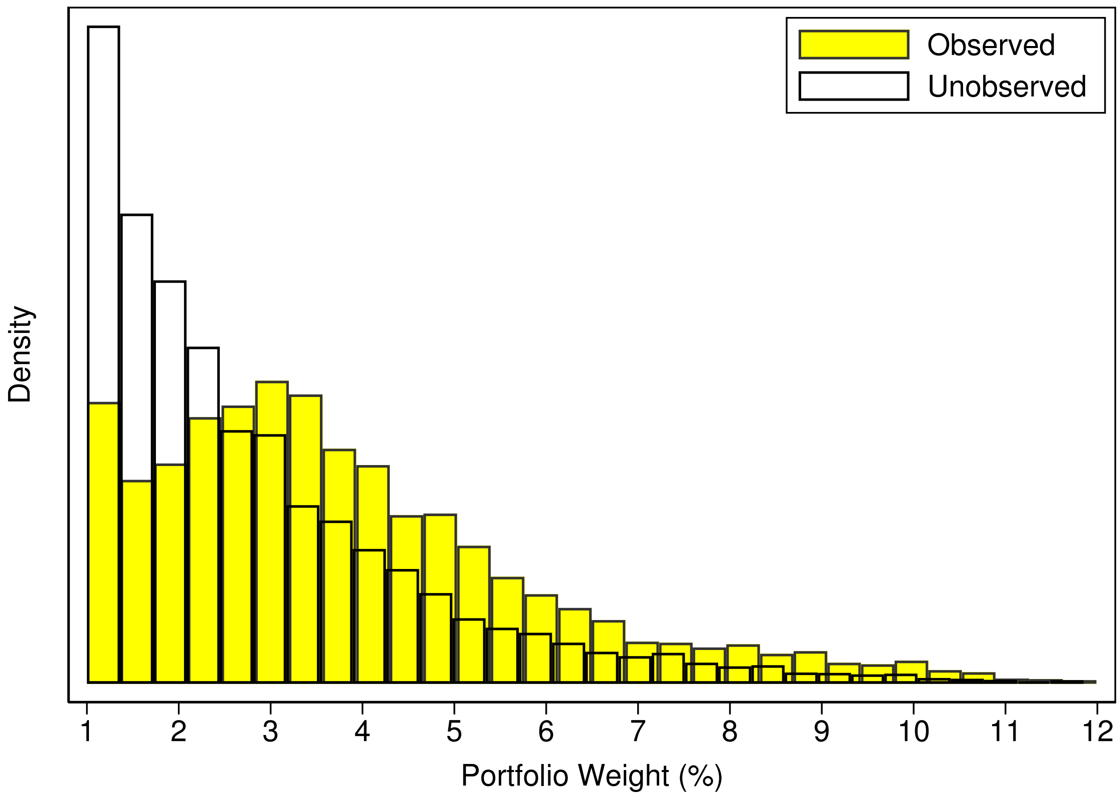


Figure 3: **Fund Portfolio Weight of Suspended Stocks.**
This figure presents histograms of fund portfolio weights in suspended stocks, based on holdings at the end of the quarter before trading resumes. Stock-fund pairs for trading suspension events during 2004–2020 with a reported portfolio weight between 1% and 12% are included. A suspended holding is observed by investors if and only if the portfolio snapshot is disclosed before trading resumes.

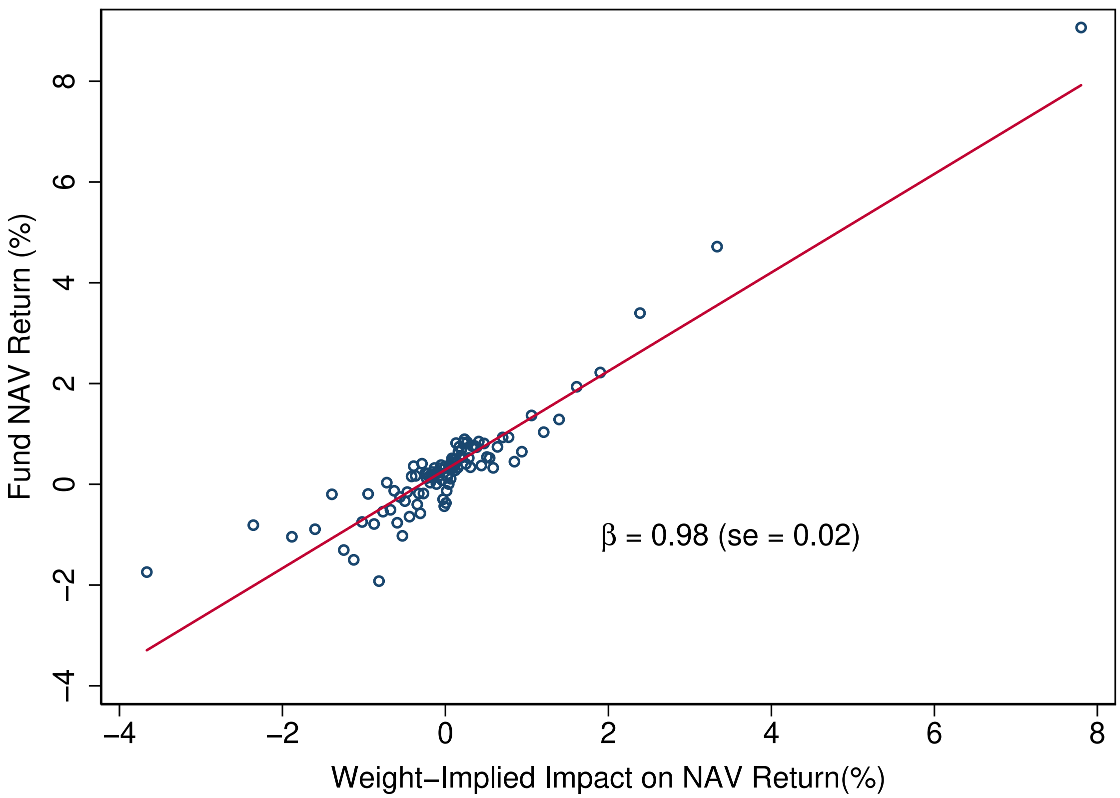


Figure 4: **Fund NAV Movements At Stock Trading Resumptions.**
This figure is a scatter plot that groups suspended fund stock holdings into 100 bins based on their weight-implied impact on fund NAVs at resumptions (i.e., the product of portfolio weight and *ResmRet*). Both axes are measured in percentage points. Fund portfolio holdings are based on disclosed holdings at the end of the quarter before trading resumes. Stock-fund pairs for all trading suspension events with at least a 1% reported portfolio weights between 2004–2020 are included. OLS estimates for slope (β) and heteroskedasticity-robust standard error are reported.

Table 1: **Predict Stock Price Movements at Resumption**

This table reports estimates from regressing *ResmRet*, stock return realized at trading resumption, on ex-ante variables measured over the suspension period: stock market and size decile portfolio returns, cumulative earnings surprises (SUE), and an AI trading signal extracted from corporate announcements. SUE is set as zero if no earnings announcement was made during the suspension period. Each observation is a stock trading suspension event between 2004–2020. Panel A includes all suspension events. Panel B includes events for which the textual content of corporate announcements is available and used to generate a trading signal $(-1, 0, 1)$ from GPT-3.5-Turbo AI model. Heteroskedasticity-robust standard errors are reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

Panel A: All Suspension Events

	(1)	(2)	(3)	(4)
Market Return	1.844***			
	(0.180)			
Size Portfolio Return		1.794***		1.789***
		(0.154)		(0.153)
SUE			0.039***	0.026***
			(0.012)	(0.007)
Intercept	0.030***	0.021***	0.083***	0.022***
	(0.004)	(0.004)	(0.004)	(0.004)
N	16,879	16,256	16,879	16,256
R^2	0.343	0.472	0.006	0.475

Panel B: Events with AI-Processed Announcements

	(1)	(2)	(3)	(4)
AI Signal	0.057***	0.049***	0.041***	0.040***
	(0.021)	(0.016)	(0.013)	(0.013)
Market Return		1.832***		
		(0.229)		
Size Portfolio Return			1.713***	1.713***
			(0.173)	(0.172)
SUE				0.015
				(0.009)
Intercept	0.094***	0.045***	0.026***	0.027***
	(0.004)	(0.005)	(0.006)	(0.006)
N	8,802	8,802	8,427	8,427
R^2	0.003	0.324	0.487	0.488

Table 2: **Summary Statistics**

This table presents summary statistics. Panel A summarizes the internet mutual fund forum sample where each observation is a fund–date pair for all sample funds and calendar days between July 2017– December 2020. Daily investor activity measures (Thread, Reply, Score, and Like) are the numbers of new posts, replies, impact scores, and user likes of threads related to suspended holdings. $SuspWgt$ is the the total weight of stocks in the fund's portfolio that are suspended. Panel B summarizes the fund flow sample, where each observation is a fund–quarter pair for all sample funds and quarters between 2004–2020. $Flow$ is quarterly net flow into a fund. $Mispricing$ is fund NAV mispricing, measured as the product of suspended holding's portfolio weight and its $ResmRet$ (or $ResmAR$), aggregated to the fund level. Fund performance is quarterly abnormal NAV return, and Family Performance is TNA-weighted average performance of funds within a family. Panel C summarizes the suspension event sample. Visit is the number of institutional investors that visit the firm, and Internet Search is total weekly Baidu Search Index of the firm, both measured during its trading suspension period. $\sigma(AR)$ is the standard deviation of daily stock abnormal returns over the first five trading days after the release day of resumption. SUE is standardized unexpected earnings, announced in the quarter after trading resumption. $MaxWgt$ is the maximum weight of the stock across all fund portfolios, as observed by investors before trading resumption. Mutual Fund Ownership is the fraction of the firm's equity held by mutual funds, and Institutional Ownership is the fraction held by institutional investors excluding mutual funds. $SuspDays$ is the suspension event's number of trading days. Earnings Announcement and Other Announcement are the numbers of firm announcements related and unrelated to earnings made during the suspension period. Superscripts *obs* and *ubs* indicate that a measure is calculated based on holdings currently observed and unobserved by investors.

Panel A: Internet Mutual Fund Forum Activity Sample

	N	mean	sd	p90	p95	p99	max
Thread	1,530,089	0.001	0.043	0	0	0	11
Reply	1,530,089	0.001	0.199	0	0	0	196
Score	1,530,089	0.003	0.164	0	0	0	47
Like	1,530,089	0.001	0.174	0	0	0	202
$SuspWgt^{obs}$	1,530,089	0.8%	2.5%	3.0%	5.3%	11.6%	63.9%
$SuspWgt^{ubs}$	1,530,089	0.2%	0.9%	0.4%	1.7%	4.2%	24.8%

Table 2: **Summary Statistics - Continued**

Panel B: Fund Flow Sample

	N	mean	sd	p1	p50	p99
Flow	29,938	-3.8%	20.8%	-49.4%	-4.0%	75.0%
Mispricing^{obs}: $ResmRet$	29,938	0.0%	0.6%	-1.2%	0.0%	1.4%
Mispricing^{ubs}: $ResmRet$	29,938	0.0%	0.3%	-0.6%	0.0%	0.5%
Mispricing^{obs}: $ResmAR$	29,938	0.0%	0.4%	-1.0%	0.0%	1.2%
Mispricing^{ubs}: $ResmAR$	29,938	0.0%	0.2%	-0.5%	0.0%	0.4%
Fund Performance	29,938	1.0%	7.7%	-19.4%	0.6%	23.3%
Fund TNA (CNY million)	29,938	2,001.2	3,202.4	104.6	878.3	15,069.8
Fund Age (year)	29,938	5.7	3.7	1.3	4.6	15.9
Fund Ret Vol	29,938	5.4%	3.4%	0.3%	4.9%	16.4%
Purchase Fee	29,938	0.0%	0.0%	0.0%	0.0%	0.0%
Redemption Fee	29,938	0.4%	0.2%	0.0%	0.5%	1.0%
Expense Ratio	29,938	1.6%	0.4%	0.2%	1.8%	2.2%
Family TNA (CNY million)	29,938	33,123.3	32,149.4	775.1	24,483.1	145,651.7
Family Performance	29,938	0.7%	5.3%	-14.0%	0.7%	14.2%

Panel C: Suspension Event Sample

	N	mean	sd	p1	p50	p99
Visit: All Institutions	7,570	1.4	10.2	0.0	0.0	38.0
Visit: Private Funds	7,570	0.4	3.9	0.0	0.0	12.0
Internet Search: PC	9,165	4,795	39,586	46	1,401	40,427
Internet Search: Mobile	7,189	19,317	582,738	178	2,480	59,623
$\|ResmAR\|$	16,385	12.8%	40.2%	0.1%	6.3%	95.7%
$\sigma(AR)$	16,246	3.2%	2.3%	0.5%	2.8%	8.9%
SUE	14,998	0.0	1.7	-6.5	0.0	7.4
MaxWgt	16,385	2%	3%	0%	0%	10%
Mutual Fund Ownership	16,385	3%	5%	0%	0%	22%
Institutional Ownership	16,385	37%	25%	0%	39%	85%
SuspDays	16,385	28.8	64.4	2.0	10.0	204.0
MarketCap (CNY million)	16,385	6,381	18,282	172	3,089	54,377
Number of Shareholder	16,385	41,811	58,330	4,638	25,852	277,468
Book to Market	16,385	0.28	0.19	-0.13	0.26	0.76
Earnings Announcement	16,385	0.5	1.2	0.0	0.0	4.0
Other Announcement	16,385	1.9	4.2	0.0	1.0	18.0

Table 3: **Investor Internet Forum Activities and Suspended Stock Holdings**

This table reports estimates from regressions of investor internet forum activity measures on suspended fund stock holdings. Each observation is a fund-day pair for calendar days between July 2017–December 2020. In columns (1)–(4), the dependent variables are the daily numbers of new posts, replies, impact scores, and user likes of threads related to suspended holdings. In Panel A, regressor $SuspWgt$ is the total weight of stocks in the fund's portfolio that are suspended. In Panel B, regressors $SuspWgt \in (0, 5\%]$, $SuspWgt \in (5, 10\%]$, and $SuspWgt > 10\%$ are dummy variables that equal one if $SuspWgt$ is within $(0, 5\%]$, $(5, 10\%]$, and $> 10\%$, respectively. Superscripts *obs* and *ubs* indicate that stock holdings that are currently observed and unobserved by investors. Standard errors are two-way clustered at the stock and week levels and reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

Panel A: Continuous Regressors

	(1)	(2)	(3)	(4)
	Thread	Reply	Score	Like
SuspWgt^{obs}	0.137***	0.133**	0.424***	0.056**
	(0.033)	(0.063)	(0.099)	(0.024)
SuspWgt^{ubs}	0.041	0.052	0.139	0.030
	(0.034)	(0.055)	(0.111)	(0.019)
Fund Fixed Effects	Y	Y	Y	Y
Date Fixed Effects	Y	Y	Y	Y
N	1.53m	1.53m	1.53m	1.53m
R^2	0.020	0.004	0.016	0.002
Test: $\text{SuspWgt}^{obs} = \text{SuspWgt}^{ubs}$				
F statistic	18.79	4.34	15.68	2.13
p value	0.000	0.039	0.000	0.146

Panel B: Dummy Regressors

	(1)	(2)	(3)	(4)
	Thread	Reply	Score	Like
$\text{SuspWgt}^{obs} \in (0, 5\%]$	0.001***	0.001***	0.003***	0.001***
	(0.000)	(0.000)	(0.001)	(0.000)
$\text{SuspWgt}^{obs} \in (5\%, 10\%]$	0.007***	0.005***	0.023***	0.001**
	(0.002)	(0.001)	(0.005)	(0.001)
$\text{SuspWgt}^{obs} > 10\%$	0.020***	0.023*	0.063***	0.009**
	(0.006)	(0.012)	(0.017)	(0.004)
$\text{SuspWgt}^{ubs} \in (0, 5\%]$	-0.000	-0.001	-0.000	0.000
	(0.000)	(0.001)	(0.001)	(0.000)
$\text{SuspWgt}^{ubs} \in (5\%, 10\%]$	0.007	0.008	0.022	0.004
	(0.005)	(0.005)	(0.015)	(0.003)
$\text{SuspWgt}^{ubs} > 10\%$	0.005	-0.001	0.029	-0.000
	(0.006)	(0.001)	(0.030)	(0.001)
Fund Fixed Effects	Y	Y	Y	Y
Date Fixed Effects	Y	Y	Y	Y
N	1.53m	1.53m	1.53m	1.53m
R^2	0.019	0.004	0.015	0.002

Table 4: **Mutual Fund Flows and NAV Mispricing**

This table reports estimates from regressions of fund flows on the fund's NAV mispricing caused by suspended holdings. Each observation is a fund–quarter pair for quarters between 2006–2020. *Mispricing* is fund NAV mispricing, measured as the product of suspended holding's portfolio weight and its resumption return, aggregated to the fund level. Resumption return is measured with *ResmRet* in columns (1)-(2) and *ResmAR* in columns (3)-(4). Fund performance is quarterly abnormal NAV return, and Family Performance is TNA-weighted average performance of funds within a family. Superscripts *obs* and *ubs* indicate that the measure is calculated based on holdings currently observed and unobserved by investors. Standard errors are clustered at the fund level and reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

Dependent Variable: Fund Flow

	ResmRet		*ResmAR*	
	(1)	(2)	(3)	(4)
Mispricing^{obs}	1.72***	1.75***	2.00***	2.01***
	(0.34)	(0.34)	(0.46)	(0.46)
Mispricing^{ubs}	-0.33	-0.28	0.40	0.49
	(0.62)	(0.62)	(0.65)	(0.66)
Performance	0.33***	0.32***	0.32***	0.31***
	(0.03)	(0.03)	(0.03)	(0.03)
Log(TNA)		-0.01***		-0.01***
		(0.00)		(0.00)
Log(Age)		0.02***		0.02***
		(0.00)		(0.00)
Fund Ret Vol		0.40***		0.40***
		(0.07)		(0.07)
Repurchase Fee		-5.09*		-5.08*
		(2.73)		(2.69)
Redemption Fee		-0.44		-0.47
		(0.90)		(0.89)
Expense Ratio		-1.40***		-1.36***
		(0.49)		(0.49)
Log(Familiy TNA)		0.01***		0.01***
		(0.00)		(0.00)
Family Performance		0.02		0.02
		(0.04)		(0.04)
Quarter Fixed Effects	Y	Y	Y	Y
N	29,938	29,938	29,938	29,938
R^2	0.051	0.059	0.050	0.058
Test: $Mispricing^{obs} = Mispricing^{ubs}$				
F statistic	9.23	9.11	4.20	3.76
p value	0.002	0.003	0.041	0.053

Table 5: **Stock Exposure to Mutual Funds and Corporate Visits During Suspensions**

This table reports estimates from regressing the number of corporate visits on the stock's exposure to mutual funds. Each observation is a suspension event for SZSE-listed stocks between 2012–2020. The dependent variable is the number of corporate visits by institutional investors during the suspension period. Visits by all institutional investors are used in columns (1)-(2), and visits by only private funds (e.g., hedge funds) are used in columns (3)-(4). $MaxWgt$ is the maximum weight of the stock across all fund portfolios, as observed by investors before trading resumption. Mutual Fund Ownership is the fraction of the firm's equity held by mutual funds, and Institutional Ownership is the fraction held by institutional investors excluding mutual funds. SuspDays is the suspension event's number of trading days. Earnings Announcement and Other Announcement are the numbers of firm announcements related and unrelated to earnings made during the suspension period. Standard errors are clustered at the stock level and reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

Dependent Variable: Number of Corporate Visits

	All Institutions		Private Funds	
	(1)	(2)	(3)	(4)
MaxWgt	23.15***	22.02***	9.04***	8.74***
	(7.51)	(7.38)	(2.88)	(2.83)
Mutual Fund Ownership	-2.28	-1.31	-1.87	-1.61
	(4.69)	(4.65)	(1.61)	(1.59)
Institutional Ownership	-1.50*	-1.61*	-0.69**	-0.72**
	(0.81)	(0.82)	(0.31)	(0.32)
Log(SuspDays)	0.81***	0.48***	0.21***	0.12**
	(0.10)	(0.16)	(0.03)	(0.06)
Log(MarketCap)	1.34***	1.50***	0.46***	0.50***
	(0.31)	(0.33)	(0.13)	(0.13)
Log(Shareholder)	0.13	0.09	0.04	0.03
	(0.22)	(0.22)	(0.08)	(0.08)
Book to Market		2.63***		0.71***
		(0.83)		(0.27)
Log(EarningsAnn)		1.15***		0.29*
		(0.44)		(0.16)
Log(OtherAnn)		0.12		0.04
		(0.25)		(0.09)
Quarter Fixed Effects	Y	Y	Y	Y
City Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	Y	Y	Y
N	7,554	7,554	7,554	7,554
R^2	0.06	0.06	0.05	0.05

Table 6: **Stock Exposure to Mutual Funds and Internet Searches During Suspensions**

This table reports estimates from regressing internet searches during a stock's suspension on the stock's exposure to mutual funds. Each observation is a suspension event between 2006–2020. The dependent variable is the natural log of the firm's total weekly Baidu Search Index during the suspension period. Searches from PCs are used in columns (1)-(2), and searchs from mobile devices (only for 2011-2020) are used in columns (3)-(4). $MaxWgt$ is the maximum weight of the stock across all fund portfolios, as observed by investors before trading resumption. Mutual Fund Ownership is the fraction of the firm's equity held by mutual funds, and Institutional Ownership is the fraction held by institutional investors excluding mutual funds. SuspDays is the suspension event's number of trading days. Earnings Announcement and Other Announcement are the numbers of firm announcements related and unrelated to earnings made during the suspension period. Standard errors are clustered at the stock level and reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

Dependent Variable: Internet Search Index

	PC		Mobile Devices	
	(1)	(2)	(3)	(4)
MaxWgt	0.99***	0.97***	0.57	0.65*
	(0.36)	(0.36)	(0.37)	(0.37)
Mutual Fund Ownership	-0.28	-0.27	-0.53**	-0.57**
	(0.24)	(0.24)	(0.27)	(0.27)
Institutional Ownership	-0.15***	-0.16***	-0.10*	-0.09*
	(0.05)	(0.05)	(0.05)	(0.05)
Log(SuspDays)	0.99***	0.95***	0.98***	0.95***
	(0.01)	(0.01)	(0.01)	(0.01)
Log(MarketCap)	0.25***	0.25***	0.18***	0.17***
	(0.02)	(0.02)	(0.02)	(0.02)
Log(Shareholder)	0.34***	0.34***	0.48***	0.48***
	(0.02)	(0.02)	(0.02)	(0.02)
Book to Market		-0.06		-0.20***
		(0.09)		(0.06)
Log(EarningsAnn)		0.08***		0.07***
		(0.02)		(0.02)
Log(OtherAnn)		0.01		0.00
		(0.01)		(0.01)
Quarter Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	Y	Y	Y
N	8,758	8,758	7,134	7,134
R^2	0.82	0.83	0.83	0.84

Table 7: **Stock Exposure to Mutual Funds and Price Informativenss at Trading Resumptions**

This table reports estimates from regressing the informativeness of stock price movement at resumption on the stock's exposure to mutual funds. Each observation is a suspension event between 2004–2020. The dependent variable is $|ResmRet|$, the absolute value of stock return realized at trading resumption. Sample in columns (1)-(2) includes all suspension events, and sample in columns (3)-(4) includes only events that are not affected by daily price limits at the resumption day. $MaxWgt$ is the maximum weight of the stock across all fund portfolios, as observed by investors before trading resumption. $\sigma(AR)$ is the standard deviation of daily stock abnormal returns over the first five trading days after the release day of resumption. Mutual Fund Ownership is the fraction of the firm's equity held by mutual funds, and Institutional Ownership is the fraction held by institutional investors excluding mutual funds. SuspDays is the suspension event's number of trading days. Earnings Announcement and Other Announcement are the numbers of firm announcements related and unrelated to earnings made during the suspension period. Standard errors are clustered at the stock level and reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

Dependent Variable: $|ResmRet|$

	All Suspension Events		Events w/o Price Limits	
	(1)	(2)	(3)	(4)
MaxWgt	0.54***	0.52***	1.41***	1.30***
	(0.20)	(0.19)	(0.36)	(0.32)
$\sigma(AR)$	0.97***	0.90***	0.54	0.43
	(0.17)	(0.17)	(0.33)	(0.32)
Mutual Fund Ownership	0.26***	0.26***	0.43***	0.44***
	(0.08)	(0.08)	(0.14)	(0.14)
Institutional Ownership	0.08***	0.07***	0.16***	0.15***
	(0.03)	(0.03)	(0.04)	(0.04)
Log(SuspDays)	0.08***	0.03***	0.11***	0.04***
	(0.01)	(0.00)	(0.02)	(0.01)
Log(MarketCap)	-0.09***	-0.09***	-0.14***	-0.13***
	(0.02)	(0.02)	(0.03)	(0.03)
Log(Shareholder)	0.04***	0.04***	0.07***	0.07***
	(0.01)	(0.01)	(0.02)	(0.02)
Book to Market		0.12**		0.18*
		(0.06)		(0.09)
Log(EarningsAnn)		0.17***		0.28***
		(0.03)		(0.05)
Log(OtherAnn)		0.01		-0.00
		(0.01)		(0.03)
Quarter Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	Y	Y	Y
N	16,239	16,239	8,831	8,831
R^2	0.11	0.13	0.12	0.16

Table 8: **Stock Exposure to Mutual Funds and the Sensitivity of Earnings to Price Movements At Resumption**

This table reports estimates from regressing a firm's future earnings surprise on the interaction between the stock's exposure to mutual funds and its price movement at trading resumption. Each observation is a suspension event between 2004–2020. The dependent variable is the firm's standardized unexpected earnings (SUE) announced in the quarter after trading resumption. Stock price movement $PriceMove$ is measured with $ResmRet$ in columns (1)-(2) and $ResmAR$ in columns (3)-(4). $MaxWgt$ is the maximum weight of the stock across all fund portfolios, as observed by investors before resumption. Mutual Fund Ownership is the fraction of the firm's equity held by mutual funds, and Institutional Ownership is the fraction held by institutional investors excluding mutual funds. SuspDays is the suspension event's number of trading days. Earnings Announcement and Other Announcement are the numbers of firm announcements related and unrelated to earnings made during the suspension period. Standard errors are clustered at the stock level and reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

Dependent Variable: SUE

	$ResmRet$		$ResmAR$	
	(1)	(2)	(3)	(4)
WgtMax × PriceMove	4.44**	4.26**	4.76*	4.65*
	(2.11)	(2.11)	(2.67)	(2.68)
PriceMove	0.08**	0.09**	0.09**	0.10**
	(0.03)	(0.03)	(0.04)	(0.04)
MaxWgt	-1.42*	-1.38*	-1.31*	-1.28*
	(0.77)	(0.78)	(0.77)	(0.78)
Mutual Fund Ownership	1.02**	1.00**	1.06**	1.04**
	(0.44)	(0.44)	(0.44)	(0.44)
Institutional Ownership	0.12	0.11	0.12	0.12
	(0.08)	(0.08)	(0.08)	(0.08)
Log(SuspDays)	-0.02*	-0.04***	-0.02*	-0.04***
	(0.01)	(0.02)	(0.01)	(0.02)
Log(MarketCap)	0.13***	0.12***	0.12***	0.12***
	(0.03)	(0.03)	(0.03)	(0.03)
Log(Shareholder)	-0.11***	-0.10***	-0.10***	-0.10***
	(0.03)	(0.03)	(0.03)	(0.03)
Book to Market		-0.25***		-0.25***
		(0.08)		(0.08)
Log(EarningsAnn)		0.03		0.04
		(0.04)		(0.04)
Log(OtherAnn)		0.05		0.05*
		(0.03)		(0.03)
Quarter Fixed Effects	Y	Y	Y	Y
Industry Fixed Effects	Y	Y	Y	Y
N	14,998	14,998	14,998	14,998
R^2	0.04	0.04	0.04	0.04

Internet Appendix

"Information Acquisition by Mutual Fund Investors"

IA.1. Model Proofs

Proof of Lemma 1. Under the model's distributional assumption, it is standard that an investor's $t = 1$ optimal investment choice is

$$x(s_i, p) = \frac{\mathbb{E}[v|s_i, p] - p}{\rho Var[v|s_i, p]}, \tag{IA.1}$$

where

$$\mathbb{E}[v|s_i, p] = v_0 + Cov\Big[v, \begin{pmatrix} s_i \\ p \end{pmatrix}\Big]' Var\Big[\begin{pmatrix} s_i \\ p \end{pmatrix}\Big]^{-1} \begin{pmatrix} s_i - v_0 \\ p - p_0 \end{pmatrix}, \tag{IA.2}$$

$$Var[v|s_i, p] = \tau_v^{-1} - Cov\Big[v, \begin{pmatrix} s_i \\ p \end{pmatrix}\Big]' Var\Big[\begin{pmatrix} s_i \\ p \end{pmatrix}\Big]^{-1} Cov\Big[v, \begin{pmatrix} s_i \\ p \end{pmatrix}\Big]. \tag{IA.3}$$

Using the conjectured price function (1), the demand in $(IA.1)$ can be written as

$$x(s_i, p) = \frac{\tau_s}{\rho} s_i + \zeta(p), \tag{IA.4}$$

where ζ is an affine function of p. By law of large numbers, the aggregate demand

$$X(p) = \frac{\tau_s}{\rho} \int_0^1 s_i \, \mathrm{d}i + \zeta(p) + u = \frac{\tau_s}{\rho} v + \zeta(p) + u, \tag{IA.5}$$

so for market makers, curve $X(\cdot)$ is observationally equivalent to $\frac{\tau_s}{\rho} v + u$, and equilibrium price satisfies $p = \mathbb{E}[v|\frac{\tau_s}{\rho} v + u]$. Since $(v, \frac{\tau_s}{\rho} v + u)$ is jointly normal, this implies

$$p = \underbrace{v_0}_{p_0} + \underbrace{\frac{\tau_u \tau_s^2}{\rho^2 \tau_v + \tau_u \tau_s^2}}_{\gamma} (v - v_0) + \underbrace{\frac{\rho \tau_u \tau_s}{\rho^2 \tau_v + \tau_u \tau_s^2}}_{\lambda} u. \tag{IA.6}$$

Substitute γ and λ into $(IA.1)$ and collect terms, it follows that $\zeta(p) = -\frac{\tau_s}{\rho} p$, which in turn leads to the optimal demand schedule in (2).

Next, using the values of γ and λ,

$$Var[v|p] = \tau_v^{-1} - \frac{Cov[v,p]^2}{Var[p]} = \frac{\rho^2}{\rho^2\tau_v + \tau_u\tau_s^2}, \tag{IA.7}$$

rearranging which gives $\Phi = \frac{\tau_u\tau_s^2}{\rho^2}$ in Lemma 1. Moreover, equation (IA.6) implies

$$Var[p - v_0] = \frac{\tau_u\tau_s^2}{\tau_v(\rho^2\tau_v + \tau_u\tau_s^2)}. \tag{IA.8}$$

Given (IA.7), we have $\rho^2\tau_v + \tau_u\tau_s^2 = \rho^2(\Phi + \tau_v)$, and hence

$$Var[p - v_0] = \frac{\tau_u\tau_s^2}{\rho^2\tau_v(\Phi + \tau_v)} = \frac{1}{\tau_v} - \frac{1}{\Phi + \tau_v}. \tag{IA.9}$$

Proof of Proposition 1. Given the model setup, conditional on s_i, v_f is normally distributed. At $t = 1$, if $M = 0$, the investor chooses

$$y(s_i) = \frac{\mathbb{E}[v_f|s_i] - p_f}{\rho Var[v_f|s_i]}, \tag{IA.10}$$

where

$$\mathbb{E}[v_f|s_i] - p_f = \theta(\mathbb{E}[v|s_i] - v_0) = \frac{\theta\tau_s}{\tau_v + \tau_s}(s_i - v_0), \tag{IA.11}$$

$$Var[v_f|s_i] = \theta^2 Var[v|s_i] + (1-\theta)^2 Var[\omega] = \frac{\theta^2}{\tau_v + \tau_s} + \frac{(1-\theta)^2}{\tau_\omega}. \tag{IA.12}$$

Since $\int_0^1 s_i \, \mathrm{d}i = v$, investors' total investment in the fund is

$$\int_0^1 y_i \, \mathrm{d}i = \frac{\theta\tau_s}{(\tau_v + \tau_s)\rho Var[v_f|s_i]}(v - v_0). \tag{IA.13}$$

Meanwhile, for any equilibrium price p, the mispricing of fund shares is

$$\theta(p - v_0) = \theta\gamma(v - v_0) + \theta\lambda u. \tag{IA.14}$$

Since $\gamma > 0$, as shown in (IA.6), and $Cov[v, u] = 0$, it follows that $Cov[\int_0^1 y_i \, \mathrm{d}i, \theta(p - v_0)] > 0$.

Proof of Lemma 2. In the first step, we derive the investor's expected utility at $t = 1$ when the asset is tradable. Substitute (IA.1) into this conditional expected utility and collect terms,

$$V(s_i, p) = -\exp\Big(- \rho W_0 - \frac{(\mathbb{E}[v|s_i, p] - p)^2}{2Var[v|s_i, p]}\Big). \tag{IA.15}$$

The optimal demand schedule (2) implies that $\mathbb{E}[v|s_i, p] - p = \tau_s Var[v|s_i, p](s_i - p)$, hence

$$V(s_i, p) = -\exp\Big(- \rho W_0 - \frac{1}{2}\tau_s^2 Var[v|s_i, p](s_i - p)^2\Big). \tag{IA.16}$$

Since $s_i - p$ is normal with mean zero and variance $Var[s_i - p]$, we can rewrite $(s_i - p)^2$ as $Var[s_i - p] \cdot z$, where z follows a chi-square distribution with one degree of freedom: $z \sim \chi^2(1)$. Using the moment generating function of z, the investor's $t = 0$ expectation of $V(s_i, p)$ is

$$\mathbb{E}[V(s_i, p)] = -e^{-\rho W_0}\Big(1 + \tau_s^2 Var[v|s_i, p]Var[s_i - p]\Big)^{-1/2}. \tag{IA.17}$$

To simplify the equation above, it can be verified with the values of γ and λ that

$$\tau_s Var[v|s_i, p]Var[s_i - p] = Var[v|p]. \tag{IA.18}$$

Therefore

$$\mathbb{E}[V(s_i, p)] = -e^{-\rho W_0}\sqrt{\frac{\tau_v + \Phi}{\tau_v + \tau_s + \Phi}}, \tag{IA.19}$$

which is strictly increasing and concave in τ_s on $\mathbb{R}_+$.

In the second step, we derive the investor's expected utility at $t = 1$ when the risky asset non-tradable. Substitute (IA.10) into $\mathbb{E}[u(W_i)|s_i, M = 0]$, it follows that

$$V_f(s_i) = -\exp\Big(- \rho W_0 - \frac{(\mathbb{E}[v_f|s_i] - p_f)^2}{2Var[v_f|s_i]}\Big). \tag{IA.20}$$

Recognize that in

$$(\mathbb{E}[v_f|s_i] - p_f)^2 = \frac{\theta^2\tau_s^2}{(\tau_v + \tau_s)^2}(s_i - v_0)^2, \tag{IA.21}$$

variable $(s_i - v_0)$ is normally distributed with zero mean, and we can rewrite $(s_i - v_0)^2 = (\tau_v^{-1} + \tau_s^{-1}) \cdot z$, where z follows a chi-square distribution with one degree of freedom: $z \sim \chi^2(1)$.

Using the moment generating function of z, the investor's $t = 0$ expectation of $V_f(s_i)$ is

$$\mathbb{E}[V_f(s_i)] = -e^{-\rho W_0}\left(1 + \frac{\tau_s \tau_\omega}{\tau_v(\tau_\omega + (\frac{1}{\theta} - 1)^2(\tau_v + \tau_s))}\right)^{-1/2}, \tag{IA.22}$$

which is also concave in τ_s for any θ.

In the last step, we characterize the equilibrium. At $t = 0$, the investor takes price p, and hence its informativeness Φ, as given and chooses τ_s to maximize

$$\Pi(\tau_s) = q\mathbb{E}[V(s_i, p)] + (1 - q)\mathbb{E}[V_f(s_i)] - c(\tau_s). \tag{IA.23}$$

Since c is strictly convex, the objective Π is a continuous and strictly concave function of τ_s. The investor's optimal choice is then characterized by first-order condition

$$q\frac{\partial \mathbb{E}[V(s_i, p)]}{\partial \tau_s} + (1 - q)\frac{\partial \mathbb{E}[V_f(s_i)]}{\partial \tau_s} - c'(\tau_s) = 0. \tag{IA.24}$$

If an equilibrium exists, every investor chooses τ_s given $\Phi = \frac{\tau_s^2 \tau_u}{\rho^2}$. In equilibrium, τ_s solves equation (4) in the text:

$$q \cdot \psi(\tau_s) + (1 - q)\varphi(\tau_s, \theta) = c'(\tau_s), \tag{IA.25}$$

where

$$\psi(\tau_s) = 2e^{-\rho W_0}\left(\tau_v + \frac{\tau_s^2 \tau_u}{\rho^2}\right)^{1/2}\left(\tau_v + \tau_s + \frac{\tau_s^2 \tau_u}{\rho^2}\right)^{-3/2} \tag{IA.26}$$

is strictly decreasing on $\mathbb{R}_+$ and lower bounded by zero, and

$$\varphi(\tau_s, \theta) = 2e^{-\rho W_0}\tau_\omega(\tau_v + \tau_s)^{-3/2}\left(\frac{\tau_v}{(\tau_\omega + (\frac{1}{\theta} - 1)^2\tau_v)(\tau_\omega + (\frac{1}{\theta} - 1)^2(\tau_v + \tau_s))}\right)^{1/2} \tag{IA.27}$$

is strictly decreasing in τ_s and strictly increasing in θ. Thus, the left hand side of (IA.25) is a continuous function that is positive at $\tau_s = 0$, strictly decreasing in τ_s, and approaches zero as τ_s goes to infinity. Since the right hand side satisfies $c'(0) = 0$ and is continuous and strictly increasing, there exists a unique equilibrium.

IA.2. Processing Announcements with AI

This section explains how we use OpenAI's GPT-3.5-turbo Large Language Mode (LLM) to process the textual information in corporate announcements.

IA.2.1. Prepare Textual Information

We begin with all announcements made during the suspension period and exclude earnings announcements, for which the information is already quantified by our earnings surprise measure. Next, we filter, clean, and standardize the raw textual information.

To remove uninformative briefings, we require the announcement text to be no shorter than 50 Chinese characters. In some suspension events, the firm regularly releases announcements with almost identical content. We remove such repetitive announcements as follows. For each announcement, we calculate a textual similarity score based on the generalized edit distance between the content of the announcement and every subsequent announcement made during the same suspension event. If multiple announcements are highly similar, we keep only the latest one within the suspension event. We then sort all filtered announcements of a suspension event by announcement date and concatenate them into a single string as input.

IA.2.2. Prompts

To improve the AI model's performance in processing information in the context of the Chinese stock market, we write our prompts in Chinese language. The GPT-3.5-turbo is a chat-based model that simulates a conversation between the user and a system, which requires high-level instructions that help guide the model's responses to specific instructions in our message. Below are our prompts.

High-level instructions:

> 您是一位有丰富经验的中国股票投资专家。请记住，停牌期间如果宣布重大资产或债务重组成功，复牌后股价往往大涨，而如果重大项目失败，复牌后股价通常下跌。然而，重大事件的筹划，以及停复牌，分红派息，并购，发行证券等并一定不意味着公司股价会因此而上升或下降。股价取决于事件的结果是否优于预期。

Content of our message:

> 以下为某上市公司在停牌期间发布的公告。回复'涨'如果您预测复牌后股价会上涨，'跌'如果您预测股价会下跌，或者'不知道'如果您没有把握判断未来股价方向。不要解释具体原因。这里是公告内容： [input announcement here].

Our prompt instructs the AI model to act as an expert Chinese stock investor and evaluate the impact of corporate announcements on stock prices, with an emphasis on the progress (e.g., success or failure) of major events. The AI's response is a single word indicating its prediction of whether stock price will go "up" or "down" after trading resumes. If the AI is uncertain, it will respond with "I don't know". We convert these responses into a numerical variable, which takes values -1, 0, or 1.

IA.3. Fund Valuation Adjustment

For a subset of events where suspensions and resumptions occur in two separate quarters, we can observe the suspended stock's share value reported by the fund at the last quarter-end prior to resumption. There are 2,972 such events and 35,285 fund-event pairs, where 50.3% of pairs adjusted the share value during suspension. In Table IA.1, we show that the average fund valuation adjustment positively predicts stock movements at resumption. However, the predictive power of the valuation adjustment is completely subsumed when we include market returns in the regression, suggesting that fund companies do not adjust the value of suspended stocks beyond market returns.

IA.4. Holdings Observed and Unobserved by Investors

This section provides details on how we determine suspended fund stock holdings observed and unobserved by investors at different points of time in our fund-level samples.

IA.4.1. Internet Mutual Fund Forum Investor Activities Sample

This is a fund–day panel of investor activities on EastMoney, an Internet forum used by Chinese mutual fund investors, for all sample funds and calendar days between July 2017–December 2020.

(a) Observed suspended holdings (*obs*) on a day:

   i. We inner join a dataset of currently suspended stock-day pairs with all fund holdings at the end of the two preceding quarters that are disclosed before the current day. We then keep the most recently disclosed stock–day–fund observation if the trio is matched to two portfolio snapshots. Next, we aggregate portfolio weight of suspended holdings to the fund-day level.

   ii. These are suspended holdings suggested by the portfolio snapshot that investors can observe on the day.

(b) Unobserved suspended holdings (*ubs*) on a day:

   i. We inner join a dataset of currently suspended stock-day pairs with all fund holdings for which the portfolio snapshot date is before the resumption date and are disclosed after the current day. We keep the earliest fund–day–stock observation if the trio is matched to two portfolio snapshots. We then exclude a fund–day–stock observation if it is in the observed suspended holdings above. Next, we aggregate portfolio weight of suspended holdings to the fund–day level.

ii. These are suspended holdings that investors would have believed to exist if they had more timely information on fund holdings on the day.

IA.4.2. Fund Flows Sample

This is a fund–quarter panel for all sample funds between 2004–2020.

(a) Observed suspended holdings (*obs*) in quarter t:

i. To ensure that our quarterly flow observation is associated with only information before trading resumption, we create a dataset of stock suspension events for which suspension begins at least 10 trading days before, and trading resumes no more than 30 trading days after, the end of quarter t. We then inner join this dataset with all fund holdings at the end of quarter $t-1$.

ii. These are suspended stock holdings suggested by the portfolio snapshot that investors can observe during the quarter of flow measurement.

(b) Unobserved suspended holdings (*ubs*) in quarter t:

i. We inner join the same dataset of stock suspension events with all fund holdings at the end of quarter t. We then exclude a stock–event–fund if it is among observed suspended holdings in (a).

ii. These are suspended holdings that investors would have believed to exist if they had more timely information on fund holdings during the quarter of flow measurement.

IA.5. Internet Searches Around Suspensions and Resumptions

Internet searches capture the extent to which investors access public information about a firm. To estimate how such activities change around suspension and resumption events, we separately regress the natural logarithm of a stock's weekly Baidu Search Index on two groups of weekly dummy variables. These dummies indicate the time intervals relative to suspension and resumption events. Specifically, suspension dummies equal one for weeks ranging from -1 to -7 and beyond -7 weeks before suspension, and from 1 to 7 and beyond 7 weeks after suspension. Resumption dummies are defined in a similar manner. For post-suspension dummies and pre-resumption dummies to equal one, we require the stock to be in suspension during the week. When estimating the coefficients of suspension dummies, we exclude stock-week pairs within the $[-7, +10]$ window around resumption, and vice versa for resumption dummies.

We use search indexes from mobile devices and PCs as our dependent variables. In all specifications, we control for the natural logarithm of the number of shareholders, the book-to-market ratio, stock fixed effects, and week fixed effects.

Figure IA.4 displays our estimation results. Panel A shows that before suspensions, mobile search index is stable and similar to, or slightly lower than, stock-week pairs that are not around suspension events. Once the suspension starts, search index jumps up by 15% in the first week and then quickly declines, until becoming 40% lower than usual after the seventh week. This pattern suggests that when a stock enters a prolonged suspension, investors gradually lose interest in learning about the firm. Comparing Panels A and B, our estimates based on searches from mobile devices and PCs are very similar.

Unlike suspensions, which are unanticipated, investors update their beliefs on the likelihood of resumptions as firms update on their corporate progress. Consistent with our prediction that the chance of trading increases information production, Panels C and D show that search index gradually increases from the fourth week before resumption. Search index has a sudden spike of roughly 30% greater than usual during the first week of trading resumption, after which the index slowly converges towards normal levels.

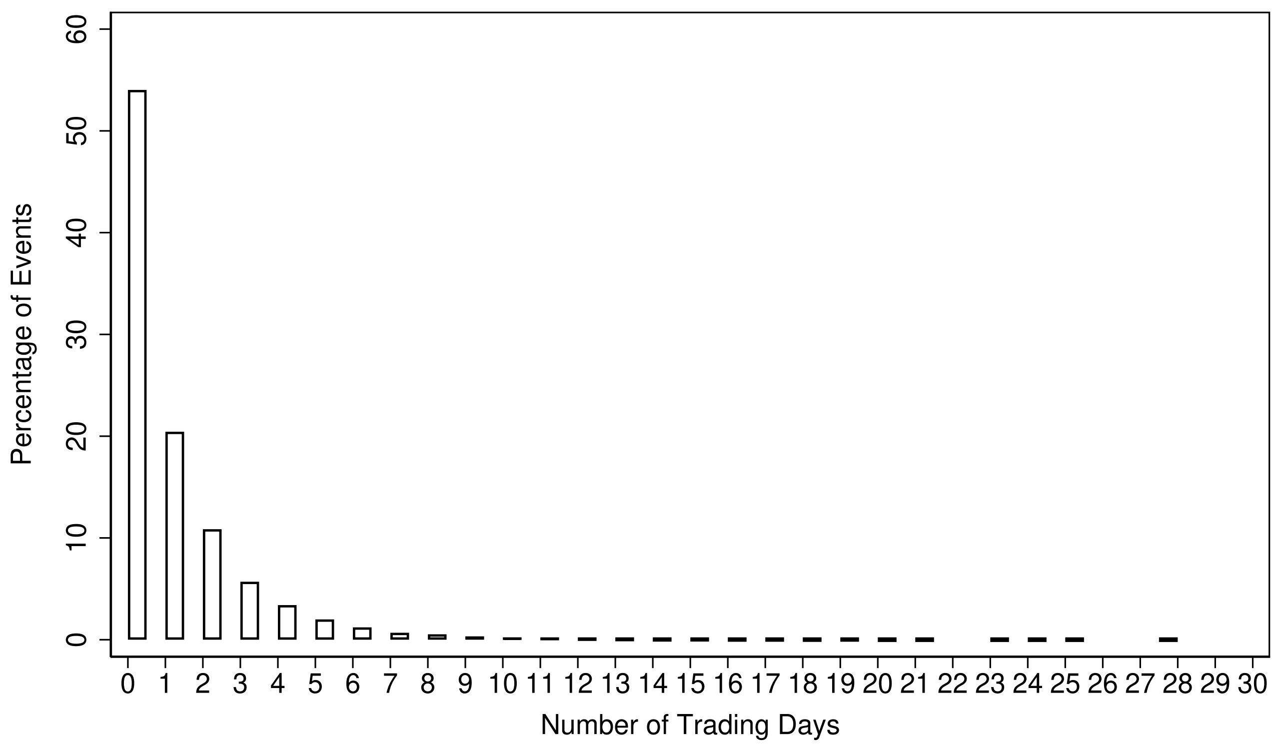


Figure IA.1: **Number of Trading Days of Hitting Price Limits After Resumption.** This figure presents a histogram for the number of consecutive trading days that a stock hits daily price limits after resumption.

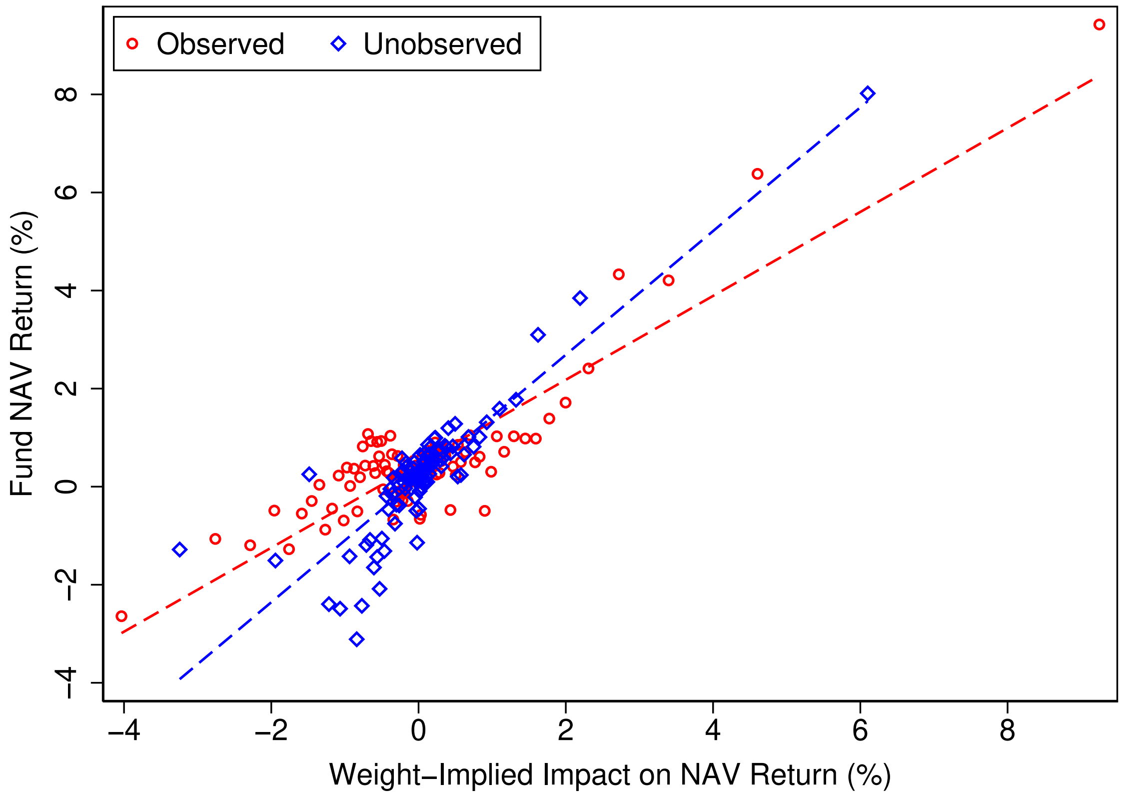
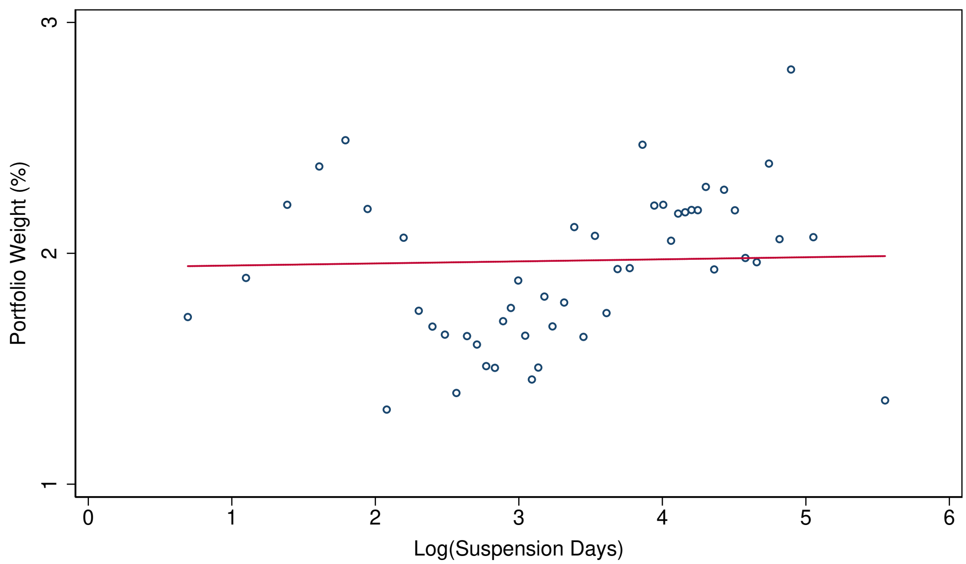


Figure IA.2: **Fund NAV Movements At Stock Trading Resumptions: Visibility of Holdings.**
This figure reports the scatter plot in Figure 4 while dividing suspended holdings into two types based on whether the holding is observed by investors before trading resumes. Suspended fund stock holdings are grouped into 100 bins based on their weight-implied impact on fund NAVs at resumptions (i.e., the product of portfolio weight and *ResmRet*). Both axes are measured in percentage points. Fund portfolio holdings are based on disclosed holdings at the end of the quarter before trading resumes. Stock-fund pairs for all trading suspension events with at least a 1% reported portfolio weights between 2004–2020 are included.

(a) Observed Fund Portfolio Weight



(b) Unobserved Fund Portfolio Weight

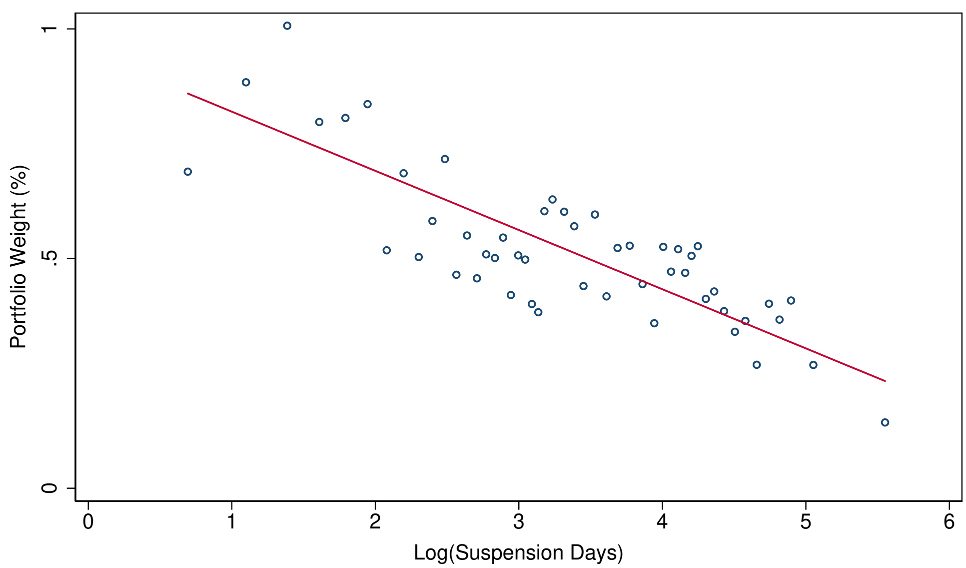


Figure IA.3: **Unobserved Portfolio Weights Mechanically Decline for Suspensions with Longer Durations.**

This figure presents a scatter plot that groups stock suspension events into 100 bins based on the number of trading days between the suspension and resumption dates. Panel (a) reports the averages of maximum fund portfolio weight observed by investors before resumptions. Panel (b) reports the averages of maximum fund portfolio weight that are unobserved by investors before resumptions. The maximum portfolio weights are based on funds with at least 100 million CNY of total net assets.

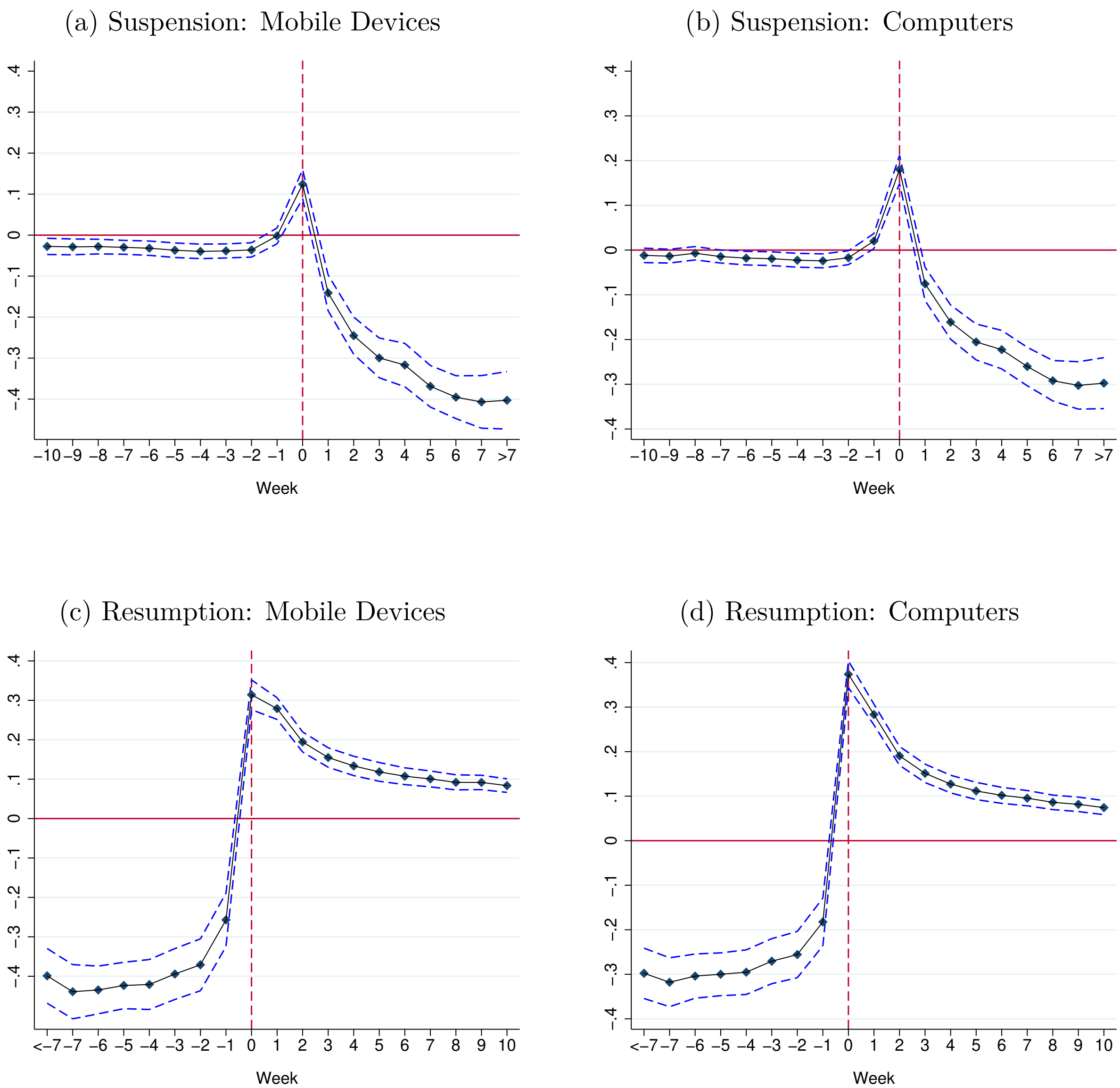


Figure IA.4: **Internet Searches Around Suspension and Resumption Events.**
This figure presents estimates from regressing the natural log of a stock's weekly Baidu search index on two groups of weekly dummy variables. The two groups of dummies indicate whether the time intervals between the current week and the week of suspension and resumption, respectively. Post-suspension dummies $\{1, 2, 3, 4, 5, 6, 7, >7\}$ and pre-resumption dummies $\{-1, -2, -3, -4, -5, -6, -7, <\text{-}7\}$ equal one only if the stock-week is in suspension. When estimating coefficients for dummies around suspension, the sample excludes stock-week pairs within $[-7, +10]$ weeks around resumption. When estimating coefficients for dummies around resumption, the sample excludes stock-week pairs within $[-10, +7]$ weeks around suspension. Searches from mobile devices and computers are separately reported in Panels (a), (c) and Panels (b), (d). Control variables include the natural log of the number of shareholders, book-to-market ratio, stock fixed effects, and week fixed effects. Dash lines indicate 99% confidence intervals. Standard errors are two-way clustered at the stock and week levels.

Table IA.1: **Fund Valuation Adjustment and Stock Price Movements at Resumption**

This table reports results from estimating regressions of *ResmRet* on average fund valuation adjustment (Fund Val Adj) during suspension. The sample is a subset of suspension events between 2004–2020 where suspension and resumption occur in two separate quarters, and at least one fund-reported stock valuation during suspension is observed. Valuation adjustment is measured as percentage change from the closing price at suspension to fund-reported share value at the last quarter-end prior to resumption, averaged across funds. Control variables are benchmark portfolio returns accumulated during the suspension period, including stock market return, size decile portfolio return, size-by-industry portfolio return. Heteroskedasticity-robust standard errors are reported in parentheses. *, **, *** represent 10%, 5%, and 1% levels of statistical significance.

	(1)	(2)	(3)
Fund Val Adj	1.067***	0.087	-0.113
	(0.107)	(0.108)	(0.102)
Market Return		1.190***	
		(0.103)	
Size Portfolio Return			1.265***
			(0.100)
Intercept	0.058***	0.037***	0.040***
	(0.006)	(0.004)	(0.004)
N	2,966	2,966	2,869
R^2	0.082	0.400	0.532