

# Does the Mad Money Show cause investors to go madly attentive?

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## Abstract (146 words)

We find that firm mentions/recommendations on the popular Mad Money Show significantly affect institutional and retail investor active attention, proxied by SEC EDGAR queries and posts on Stocktwits. The effects depend on recommendation directions (buy or sell) and a stock's exposure on the Show. Effects remain after controlling for other firm-specific news and moderating events (e.g., Superbowl and Olympics). The induced investor active attention subsequently affects abnormal trading volumes and short-sales activities of institutional/retail investors, and retail investor portfolios. No abnormal returns are associated with any pre-Show publicity about upcoming guest interviews. Significantly positive (negative) following-day abnormal returns for buy (sell) recommendations become significantly negative (positive) by day 20. Overall, our findings are consistent with the impact of the media and its potential influencers on the limited active attention budgets of investors, the short-term price pressure associated with noise traders, and the shorting of contrarian investors.

**Keywords:** Institutional/retail investor active attention, Media influencers, Behavioral finance, Trade/holdings/return effects.

**JEL:** G4, G11, G12, G14, L82.

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# **Does the Mad Money Show cause investors to go madly attentive?**

"Remember, I am neither a bear nor a bull, I am an agnostic opportunist. I want to make money short- and long-term. I want to find good situations and exploit them." Jim Cramer

## **1. INTRODUCTION**

Given the limited capacity to process information and a universe consisting of thousands of possible stock investments, investors allocate their attention and budget capacities to a small subset of stocks in that universe (Merton, 1987). Prior research finds that the allocation of attention among investors is affected by the channels of salient events and media. Salient events include stocks with high abnormal trading volumes, extreme one-day returns (Barber and Odean, 2008), and daily winners and losers (Kumar, Ruenzi, and Ungeheuer, 2021). Media can affect a firm's value by transmitting information that attracts the attention of investors (Engelberg and Parsons, 2011) or by increasing investor recognition (Merton, 1987), which can make stocks salient beyond an information shock (Liang, 1999). Media recommendations/mentions can be pure noise or pure (mis-)information or some mixture of the two (e.g., Antweiler and Frank, 2004) that could be interpreted differently by institutional and retail investors (e.g., Peress and Schmidt, 2020).

In this paper, we focus on one of the most well-known TV shows about the stock market on the active attention of its viewers defined as those that obtain further information about firms mentioned on the Show. Thus, unlike much of the literature, our attention measures are active since they are a combination of the attention channel (Barber and Odean, 2013) and information action channel (Guercio and Tkac, 2008). The show is Mad Money, which was launched in 2005, is hosted by Jim Cramer, and is recorded on CNBC. The Show is aired Monday through Friday from 6-7 pm ET. The Show consists of different segments covering the market, answering audience questions, interviewing guests (almost always CEOs but rarely CFOs and Board Chairs), and giving stock recommendations. The timing of the Show which follows the market close, and the clear recommendations to buy or sell specific stocks given on the Show allow us to identify the effects of the Show on the active attention and market activities of institutional and retail investors. Thus, we use the Mad Money Show (alternatively Mad Money or Show henceforth) as an experimental laboratory to study the association between a media influencer and the stock market for institutional/retail investors.

Our sample represents all recommendations/mentions, including those hand collected, on the Show from June 2006 to December 2020. The Show's impact on investor behavior is measured using two

indexes (channels) of investor attention differentiated by investor type (institutional and retail). The first is the log of activity on the SEC EDGAR server for accessing firm financial information (Chi and Shanthikumar, 2018) that we separate into institutional and retail attention using a seeker's IP. The second is the number of posts on Stocktwits (Cookson and Niessner, 2020), a social media platform that is focused on the stock market with more than 5 million active (essentially retail) users by 2021.<sup>1</sup> Based on the theory of information acquisition, we conjecture that a rational economic agent trades off the cost of acquiring and analyzing information with the perceived benefits of using that information (Li and Sun, 2019). Although both platforms (SEC EDGAR and Stocktwits) are free to access, processing information and allocating attention to them is costly in terms of time spent. Hence, our abnormal attention indexes reflect the perceived benefits of follow-up activity (actions) for Show viewers. We find that a stock recommendation/mention on the Show significantly affects both attention measures. On average, a guest interview leads to an increase of 27% (169%) of daily attention to EDGAR (Stocktwits). The effect's magnitude is significant, becomes stronger with controls for confounding events, and is meaningful when benchmarked to the average increase in attention to EDGAR (Stocktwits) of 85.5% (348.1%) on earnings announcement dates. As expected, the effect on investor attention and its market impact are heterogeneous across the different Show segments, consistent with the time and information the Show's host allocates to specific firms in each segment. We illustrate that one should not assume that the Show's viewers are exclusively retail investors based on perceptions of the Show's content. By classifying queries on SEC EDGAR based on the identity of the IPs of owners into institutional (e.g., JPMorgan Chase, Morgan Stanley, Citicorp) and retail investors, we find that the Show affects the active attention of institutional investors but to a lesser extent than for retail investors.

We find a significant effect of the Show on traded volumes of recommended/mentioned stocks on the Show. On average, turnover increases by 0.7% (0.8%) on the day after a Guest interview (Featured stock). The change is material when benchmarked to the average daily turnover (1.15%) and to increases on earnings announcement dates (0.9%). The interaction term between the Show's recommendations and abnormal active attention is significant and positive. This suggests that our active attention indexes, which measure the costly act of acquisition and processing of information, reflect the (perceived) value of the Show's recommendations/mentions by investors who subsequently trade the stock.

We use ANcerno (Robinhood trading platform) to further analyze the Show's effect on institutional (retail) investor behavior. While institutional investors increase their total trading activities after recommendations/mentions on the Show, they are neither net buyers nor sellers after the Show. Abnormal active attention induced by the Show significantly affects the daily changes of the popularity

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<sup>1</sup> According to Wikipedia at: <https://en.wikipedia.org/wiki/Stocktwits>

index (PI), which measures the number of Robinhood users who hold the stock. On average, a Guest interview increases the next-day PI by 1.6% but the PI returns to its pre-interview level by ten additional days. This finding is consistent with the tendency of Robinhood investors to engage in attention-induced trading (Barber, Odean, and Schwarz, 2020). We find differences and similarities in the short-sale effects of Show recommendations/mentions for off-exchange-traded (reported by FINRA) versus on-exchange-traded firms (reported by Cboe exchanges), different segments of the Show, and institutional versus retail investors.

We also report evidence that Show recommendations/mentions significantly affect stock prices on the days following the Show. To illustrate, Guest interviews lead to a +47 basis point (bp) average abnormal return on the first day post-event, begin to dissipate and become cumulatively insignificant by day 20 post-event. To summarize, our findings suggest that while the Show can significantly affect the active attention and short-term behavior of investors, the post-event pattern of stock prices is consistent with short-term price pressure, increased noise trading, and potentially profitable opportunities for contrarian trading. We find evidence of contrarian shorting behavior for both institutional and retail investors that is more pronounced for the former.

To the best of our knowledge, our paper is the first to examine the effects of the Show on the active attention and associated trading and short selling behaviors of institutional investors, and the role of investor firm-specific, active attention as the channel for transmitting the Show's effects to information acquisition and subsequent trading behavior for investors differentiated between institutional and retail. We also extend the findings of Keasler and McNeil (2010) for the price pressure of uninformed trading to the holdings of Robinhood users, and the limited findings of Hobbs, Keasler, and McNeil (2012) about the relation of the Show's buy recommendations and short-selling for on-exchange trades to off-exchange trades where both are differentiated by institutional and retail investors. The conceptual or theoretical underpinning or lens for our empirical analyses is the timelier attention/awareness channel of Gilbert (2012) and Barber and Odean (2013) and the information digestion/action channel of Del Guercio and Tkac (2008). Alternatively, the underpinning is the tripartite classification system in psychology (Hilgard 1980), in consumer behavior (e.g., Lu, Yan and Chen, 2022), and in many other disciplines, of affect, cognition and conation. Colloquially they are referred to as feeling, knowing, and willing to act, respectively. More formally, an affect experience refers to the emotional response of becoming aware of a phenomenon (e.g., stock mentioned on the Show), a cognitive experience refers to understanding the phenomenon through the acquisition and processing of information (e.g., accessing EDGAR for a stock mentioned on the Show), and finally conation refers to a proactive behavioral response after the previous two steps (e.g., shorting a stock mentioned on the Show).

We consider three studies that deal with investor attention, information access and market effects as being close to ours. Our active measures are better at capturing a more timely and accurate active attention channel consisting of awareness and follow-up actions of viewers that have investment interests. Engelberg, Sasseville, and Williams (2012) attribute price behavior following stock recommendations on the Show to a high-income viewership based on a measure of attention, Nielsen's count of the number of viewers of a Show, that is passive since it does not measure which viewers of the Show have increased investor active attention. Our active attention indexes are superior for capturing the causal effect of the Show as they are not only firm-specific but also dynamic in that they reflect the more costly information acquisition by retail and institutional viewers of the Show. Liaukonytė, and Žaldokas (2021) study the effects of TV advertisements on information acquisition on SEC EDGAR and the association between the jump in attention after TV advertisements and next-day trading activity. While TV advertisements mainly aim to increase product sales, the Mad Money Show involves firm-specific stock informational content and recommendations/mentions so that we can decompose more costly information acquisition into their institutional and retail investor components. Not surprisingly, we find that the magnitude of the Show's impact on our active attention indexes, volumes of trading, and prices of the mentioned stocks are much larger than those found by Liaukonytė and Žaldokas (2021). Ben-Rephael et al. (2017) find that returns associated with extreme institutional attention on informational-shock announcement days (e.g., earnings announcements and analysts' recommendation changes) are higher. In contrast, we can directly isolate the Show's effect on institutional versus retail investors to show that the Show's effect is stronger in the presence of retail investors, and that increased institutional active attention makes the incremental effect of retail active attention insignificant.

Our paper also contributes to the effect of the media and the effectiveness of media influencers on the stock market. The findings of this literature identify the causal effects of the access to different local newspapers on the transactions of local investors (Engelberg and Parsons, 2011), the effect of national newspaper strikes on trading volumes, volatilities, and dispersions of stock returns (Peress, 2014), a significant increase in firm value after the salient event of media coverage of a CEO (Nguyen, 2014), and a strong association between a measure of investor attention and trading volume (Cookson and Niessner, 2020). Although the literature on the effect of media influencers on the stock market is limited, exceptions include Schoenmueller, Libai and Kogan (2021) who examine the life-cycle effects of influencers for a leading social trading platform eToro, and concerns by legal scholars such as Paul (2021) on the regulatory enforcement of claims of manipulative acts by social media influencers in the U.S. We document the significant impact of a TV show and its host as a potential influencer on the active attention

and investment behaviors of institutional and retail investors and their subsequent effects on volumes, prices, short sales and holdings of mentioned stocks.<sup>2</sup>

The remainder of the paper is organized as follows. In the next section, we discuss two important metrics that are used in our analyses. In Section 3, we describe the sample and data. Section four documents the effect of the Show on the active attention of investors. Section 5 analyzes the impact of the Show on the volume of transactions by investors (separately for institutional investors), holdings of retail investors, and short sells by institutional and retail investors. Section 6 tests the effect of the Show on abnormal stock returns and the moderating effect of institutional involvement. Section 7 performs further tests. Section 8 concludes the paper.

## **2. SOME IMPORTANT METRICS**

### **2.1 Measures of Information Acquisition**

The measurement of investor information acquisition for our purposes requires two choice decisions. The first deals with the elapsed time over which information acquisition should be measured. One possibility is a 24-hour Daily abnormal investor active attention (DAIAA) period running from 6 pm, the beginning of one Show, to 6 pm, the beginning of the next Show. Another possibility is pre-market-open investor active attention (PMIAA) which starts at 6:00 pm and ends at the market open at 9:00 am on the next day. This period is better suited to assess the impact of an appearance or mention on the Show on the most immediate trading metrics for a highlighted firm. Like the first measure, it also reflects the incremental active attention of investors from Show viewers during days when the Show is rebroadcast at 11:00 pm on the night of the original Show. The third possibility is 2-hour abnormal investor active attention (2HAIAA), the period from 6:00 pm to 8:00 pm on the same day to capture the immediate effects of the Show on the informational active attention behaviors of viewers which also allows viewers desiring to view the whole show one hour after the Show's end to seek information. We depict the three measurement periods in Figure 1.

[Insert Figure 1 about here]

The second-choice decision is the information source used to measure the informational active attention of investors. Prior research uses various indexes such as Google search volume (Da, Engelberg, and Gao, 2011), Bloomberg (Ben-Rephael, Da, and Israelsen, 2017), SEC EDGAR (Drake, Johnson,

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<sup>2</sup> While audience viewing habits are shifting from linear TV to ad-free streaming options, the Show is available on various platforms such as Netflix and YouTubeTV. <https://www.westwoodone.com/2021/04/26/the-state-of-tv-cord-cutting-viewership-declines-and-older-audiences-mean-advertisers-need-am-fm-radio-for-incremental-reach-and-the-light-tv-viewer/>

Roulstone, and Thornock, 2019), and volume of posts on social media (Cookson and Niessner, 2020) to measure the active attention of investors. As further explained below, we use direct indexes for measuring investor active attention based on downloaded queries on SEC EDGAR for all investors and further refined using internet IPs to identify institutional and retail investors, and the number of posts published on Stocktwits for retail investor.

Our first source is the discretionary downloads by users of SEC EDGAR by excluding downloads by robots or programs following Ryans (2017). The exclusions include unsuccessful queries, crawlers, IPs with downloads of more than 25 items in a minute, or 3 different companies in a minute, or more than 500 items in a day. We also classify IPs into institutional and retail investors based on the ownership of the IP, if available. We match IPs with the database of the American registry of internet numbers ([www.Arlnet.net](http://www.Arlnet.net)) and identify the owners of the IP range. For instance, the IP range from 206.212.64.0 to 206.212.127.255 belongs to the CIT group, which is a financial company. In contrast, retail investors use the IP range belonging to internet providers such as MCI Communications Services or Comcast Cable Communications. This allows us to compute investor active attention indexes for all investors and separately for institutional and retail investors.<sup>3</sup>

Our second source for retail investors is Stocktwits which is a social networking platform focused on investment and the stock market. According to the website analytic tool Similarweb, the popularity rank of Stocktwits among all websites (finance and investing) is 1482 (18) in United States as of August 2022.<sup>4</sup> We exclude posts on Stocktwits without a Cashtag (Cashtag is a stock ticker symbol, such as \$TSLA, that users can use to link their posts to the firm), or posts with more than two cashtags. For each measure of active attention, we follow Da, Engelberg, and Gao (2011), and Focke, Ruenzi, and Ungeheuer (2020) and normalize each index by using the logarithm of the ratio of the raw index over the median of the raw index on the same weekday during the last 8 weeks.<sup>5</sup>

We also construct Dummy variables for the extreme active attention of institutional and retail investors. We calculate the abnormal active attention for institutional investors (based on the number of queries of institutional investors on SEC EDGAR) and retail investors (the number of posts on Stocktwits) from 6:00 pm (start of the Show) to 9:00 am (Market open) on the next day. Following Ben-Rephael, Da, and Israelsen (2017), *Insti (Retail)* is a dummy variable, which is equal to 1 if the abnormal institutional (retail) active attention is higher than 94% of the firm's daily abnormal institutional (retail) active

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<sup>3</sup> The detailed description of the process used to exclude Robots and classify institutional and retail investors is provided in the Supplementary Appendix (SA), Section SA.1.

<sup>4</sup> We show the monthly number of posts on Stocktwits during our sample in SA Figure SA.4.

<sup>5</sup> We use  $\text{Ln}((\text{raw index} + 0.1) / (\text{Median of raw index over last 8 weeks} + 0.1))$  to avoid excluding observations when the median or number of tweets is equal to 0.

attention during the last 30 days.<sup>6</sup> We acknowledge that all activity on Edgar and Stocktwits during and after a Show by viewers of the Show is unlikely so we address this concern by examining various Show windows such as the Show hour plus the following hour when new Edgar filings are not available to the public until 6:00 am (ET) on the next day.

## **2.2 Measure of the Impact on Retail Investor Holdings**

We use the changes in the holdings of users of Robinhood to measure the impact of a mention or appearance on Mad Money on the holdings of retail investors. Robinhood is an SEC-registered broker-dealer which enables its users to purchase stocks, ETFs, options, and cryptocurrencies without commissions through its website or mobile app. The median age of Robinhood investors is young at 30, less experienced as 50% are first-time investors, and with low account balances of \$1000-\$5000.<sup>7</sup> According to a survey, Robinhood users “traded nine times as many shares as E-Trade customers, and 40 times as many shares as Charles Schwab customers, per dollar in the average customer account in the most recent quarter”.<sup>8</sup> According to the interview of the CEO of Stocktwits, 75% of Stocktwits users are male, more than three-quarter are younger than 45, and users, on average, spend between 30 minutes to two hours per day on the platform.<sup>9</sup>

We download data from Robintrack.net which has the publicly available application programming interface (API) of Robinhood from May 2018 to the termination of the API in August 2020. The data includes a popularity index (PI) that is updated hourly for each stock based on the number of Robinhood users who hold the stock (e.g., 253,199 Robinhood users held Facebook shares (FB) at 12:46 pm on August 11, 2020). We select all stocks in the Robintrack database with at least one recommendation or mention on the Show from May 2018 to August 2020.<sup>10</sup>

## **3. SAMPLE AND DATA**

### **3.1 Mad Money Show**

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<sup>6</sup> Bloomberg uses 80%, 90%, 94%, 96% and above 96% thresholds to rank the daily abnormal attention of its users. We follow Ben-Rephael et al. (2017) and use 94% as the threshold for extreme abnormal active attention.

<sup>7</sup> <https://techcrunch.com/2020/02/20/robinhood-profiles-morgan-stanley-etrade/>

<sup>8</sup> <https://www.nytimes.com/2020/07/08/technology/robinhood-risky-trading.html>

<sup>9</sup> <https://www.bloomberg.com/news/articles/2021-12-16/social-media-platform-stocktwits-nabs-210-million-valuation>

<sup>10</sup> Robintrack failed to download the data on August 9, 2018, January 24 to 29, 2019, and January 7 to 15, 2020, and had 69 outage incidents (<https://status.robinhood.com/history>). Four of those incidents affected retail trading and lasted for at least one trading hour. Times and details of the incidents are provided in SA Table SA.3.



We extract all stock recommendations on Mad Money on CNBC from May 2006 to December 2020.<sup>11</sup> Information on recommendation types (strong sell to strong buy) and Show segments (Discussed stocks, Featured stocks, Guest interviews, and Lightning/Mailbag round) are reported in Panel A, Table 1 for 2968 Shows and 48,335 recommendations (29% strong buys and only 25.4% negative mentions or sell recommendations).<sup>12</sup> Cramer discusses and shares views about one company during the “Guest interviews” and “Featured stocks” segments (16% of total recommendations), and a mere mention or only a buy or sell suggestion during the other segments. Stocks such as Apple (AAPL) or Facebook (FB) are more frequently mentioned (e.g., see SA Table SA.1 where SA refers to Supplementary Appendix).

[Insert Table 1 about here]

Compared to all CRSP stocks (share class 10 or 11) over the last 12 months, 41.81% (39.51%) of the stocks in the Guest interview (Featured stock) segment are in the top return quintile and 9.21% (8.96) are in the bottom return quintile. Compared to all stocks based on the NYSE breakpoints, 24.24% (28.19%) of stocks in Guest interviews (Featured stocks) are in the top size quintile and 11.83% (8.45%) are in the bottom size quintile. Thus, the Show tends to focus on bigger stocks and those with superior prior performance which is only partially consistent with the conclusion of Bolster, Trahan, and Venkateswaran (2012).

### 3.2 Institutional trading

We obtain daily trading data from ANcerno (also known as Abel/Noser Corporation Ltd), a consulting firm providing transactional cost analysis to institutional investors such as investment managers, plan sponsors, and brokers. According to Hu, Jo, Wang, and Xie (2018), ANcerno accounts for 1.3 trillion shares and \$37.5 trillion in transactions, covering about 12.3% of CRSP volume from 1999 to September 2011. We exclude transactions by brokers (*clienttypecode*=3) and those with missing *clienttypecode*, and aggregate data at the daily stock level for all institutional investors (*clienttypecode*=1 or 2).<sup>13</sup> We define Institutional Buys ( $IBuys_{i,t}$ ) and Institutional Sells ( $ISells_{i,t}$ ) as the aggregate dollar buys and sells transactions by institutions in firm  $i$  during day  $t$  normalized by market capitalization lagged by one year as follows:

<sup>11</sup> The stock recommendations on the Show are available on thestreet.com after April 2016. We manually read transcripts of the Show from May 2006 to June 2013 from SeekingAlpha.com and from June 2013 to April 2016 on thestreet.com to extend the sample of recommendations (see SA Figure SA.2 for examples of Show transcripts).

<sup>12</sup> The annual number of recommendations, bullishness of recommendations and the number of recommendations for each segment are provided in SA Figure SA.3.

<sup>13</sup> A detailed description of the ANcerno database can be found in Hu et al. (2018).

$$IBuys_{i,t} = \frac{\sum_{n=1}^{number\ of\ buys} IBuys_{i,t}^n}{MC_{i,t-250}} \times 100 \quad ISells_{i,t} = \frac{\sum_{n=1}^{number\ of\ sells} ISells_{i,t}^n}{MC_{i,t-250}} \times 100$$

Institutional order flow ( $IOF_{i,t}$ ) is then the difference between  $IBuys_{i,t}$  and  $ISells_{i,t}$ , and institutional volumes ( $IVOL_{i,t}$ ) is the sum of  $IBuys_{i,t}$  and  $ISells_{i,t}$  (Hendershott, Livdan, and Schürhoff, 2015). We define the abnormal institutional order flow (volume) as  $IOF_{i,t}$  ( $IVOL_{i,t}$ ) minus the average daily institutional order flow (volume) over the [-90,-30] window.

### 3.3 Short sales

We obtain short-sales data for exchanges from Cboe and off-exchanges from the Financial Industry Regulatory Authority (FINRA). Cboe is the 3<sup>rd</sup> largest exchanges group, after Nasdaq and NYSE, in the US and consists of four exchanges (BYX, BZX, EDGA, and EDGX). FINRA provides all off-exchange short-sale transactions at the aggregate daily level and the transactions level. Both databases are free and publicly available. According to Hu, Jones, and Zhang (2021), short sales on the Cboe exchanges and FINRA account for about 9.37% and 13.6% of the total trading volume. Following Hu et al. (2021), we define the short-sale ratio as the volume of shares shorted at Cboe exchanges (off-exchanges) to the total CRSP share volumes (total off-exchange volumes) for Cboe (FINRA). Boehmer, Jones, Zhang, and Zhang (2021) use the observation that OTC market makers provide small price improvements for retail orders to detect transactions of retail investors. We classify short-sale transactions with sub-penny fractions between \$0.0001 and \$0.0040 as short sales initiated by retail investors in the FINRA database and define the retail short sales ratio as retail short sales over total off-exchange volume. Short sale data on the Cboe and FINRA are available from January 2008 and August 2009, respectively.

### 3.4 Other Variables and Summary Statistics

Panel B of Table 1 provides descriptive statistics for the other variables defined in the Appendix using information drawn from CRSP, Compustat, I/B/E/S, and Robintracker.com. The correlations between the variables reported in SA Table SA.5 are generally low, except for corr. [Ln (Market Cap), analyst following].

## 4. RESULTS

### 4.1 Preliminary Observations

We first calculate abnormal active attention for stock mentions on the Show as the logarithm of the ratio of the number of visits (tweets) to EDGAR (Stocktwits) from 6:00 pm (Show start time) to 6:00 pm on the next day over the median number of such visits (Tweets) on the same weekday over the previous eight weeks. We find that a mention undifferentiated by Show segment leads to a 12.71% (62.3%)

increase in abnormal active attention for the stock on EDGAR (Stocktwits). This suggests a marked contrast in the active attention behavior of the Show on institutional and retail viewers of the Show. This is consistent with our expectation that viewers of the Show, who mostly consist of retail investors, are more likely to use social media to express their opinion than access EDGAR. Social media posts can also attract the active attention of other users beyond those that viewed the Show.

The considerably greater time spent on stocks mentioned in the Guest interview or Features segments of the Show is reflected in the Show's effects on the abnormal active attention of investors. While abnormal active attention increases by 7.3% (39%) based on EDGAR (Stocktwits) for stocks mentioned in the Discussed & Lightning round segments, the corresponding increases are 46.9% (340%) for Guest interviews. This comparison indicates that a Guest interview is relatively important since it leads to an increase in abnormal investor active attention of about 51.4% of 97% (75.2% of 452%) of the increase in abnormal active attention to EDGAR (Stocktwits) for firms on their earnings announcement (EA) dates.<sup>14</sup>

## 4.2 Main Results

While preliminary analysis shows a material effect of the Show on the information acquisition by investor types, we now test the effect in a multivariate setting where we include control variables and fixed effects. Our specific model is as follows:

$$DAIAA_{i,t} = a + \beta_0 SHOW_{t-1} + \gamma Controls + fixed\ effects + \epsilon_{i,t} \quad (1)$$

The dependent variable is the daily abnormal investor active attention ( $DAIAA_{i,t}$ ) to SEC EDGAR or Stocktwits for firm  $i$  on day  $t$ . Our main independent variable of interest is the dummy variable  $SHOW_t$ , which is equal to one if stock  $i$  is mentioned on the Show on day  $t-1$ , and zero otherwise. The control variables and their justification for inclusion are provided in the descriptor to Table 2. All regressions include firm fixed effects to control for the firm-specific active attention effect, day of the week effects to control for changes in viewer behavior during the week, and month and year fixed effects to control for the effects of time-trends. Standard errors are clustered at the firm level.

The regression results are reported in Table 2. We find that Guest interviews lead to a significant increase of 27% (169%) in queries to EDGAR (number of tweets on Stocktwits) compared to their median level over the last eight weeks. Consistent with expectations, we find that retail viewers are more likely to post on social media than to access the company disclosures posted on EDGAR. While the

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<sup>14</sup> We use the January 2010 to July 2017 overlap period between EDGAR and Stocktwits, to allow for a better comparison. Similar untabulated results are found for the full sample from June 2006 to July 2017 for EDGAR and January 2010 to December 2020 for Stocktwits. The number of posts on Stocktwits and queries on EDGAR conditioned on the occurrence of earnings announcements are reported in SA Table SA.2.

magnitude of the effects on institutional investors [column (4)] is also significant but smaller than that for retail investors [column (5)], it still shows that the Show also attracts the active attention of institutional investors.<sup>15</sup> We then benchmark these results against similarly computed active attention effects for earnings announcement dates (a proxy for the revelation of important, value-related information). We find that the mean increase in the active attention of investors to EDGAR (Stocktwits) after Guest interviews of 27% (169%) is about 31% (48%) of the mean effect of earnings announcements on investor active attention of about 85.5% (348.1%).

[Insert Table 2 about here]

However, our daily investor active attention measure ( $DIAA_{i,t}$ ) might be noisy since it may reflect confounding events that affect viewer active attention and the impact of non-viewers who paid active attention to stocks due to subsequent abnormal returns or volumes. Brunner and Ungeheuer (2019) find that salient returns (i.e., beyond an underlying information shock) can contribute significantly to information acquisition and subsequent trading. To address these concerns, we shorten the windows to only two hours to calculate the abnormal active attention from 6:00 pm (Show start) to 8:00 pm (one hour post Show). Since the market is closed and no new reports are filed on SEC EDGAR after 5:30,<sup>16</sup> we can reasonably attribute the abnormal active attention ( $2HAIAA_{i,t}$ ) during these two hours to the Mad Money Show. The results are reported in SA Table SA.8. We find that the effect of Guest interviews is stronger with  $2HAIAA_{i,t}$  for EDGAR and Stocktwits in comparison to the daily indexes. A Guest interview on the Show leads to a 47% (335%) increase in the number of queries on SEC EDGAR (posts on Stocktwits). The effect on the active attention of institutional investors is still material but smaller than that for retail investors.

We report the results for stocks mentioned in different segments of the Show for access to SEC EDGAR and posts on Stocktwits in panels B and C of SA Table SA.6. The effect on the abnormal active attention of stocks recommended on the Show is statistically significant at the 1% level for the undifferentiated [column (1)] and differentiated samples [columns (2) through (8)] and is stronger for buy [column (2)] versus sell recommendations [column (3)]. The effect differs between the Show segments and is stronger for Guest interviews and Featured stocks [columns (4), (5), and (6)] compared to the Discussed and Lightning rounds [columns (7) and (8)]. These results are consistent with our hypothesis

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<sup>15</sup> Consistent results are found for the effect of the Show on institutional versus retail investors with and without control variables for different Show segments (see SA Table SA.7).

<sup>16</sup> While filing time is from 6:00 am (ET) to 10:00 pm (ET) on weekdays, files submitted after 5:30 pm (ET) are available to the public at 6:00 am (ET) on the next day. <https://www.sec.gov/edgar/filer-information/calendar>.

about the significant effects of the Show and on the amount of media exposure on the active attention of investors.<sup>17</sup>

## 5. EFFECTS ON INVESTOR TRADING AND HOLDINGS

We now analyze the Show's effect on the traded share volumes and holdings for stock recommendations/mentions.

### 5.1 Traded share volumes

Our model for testing the Show's effect on volumes is:

$$Turnover_t = a + \beta_0 SHOW_{t-1} + \gamma Controls + fixed\ effects + \epsilon_{i,t} \quad (2)$$

Daily turnover is the ratio of traded volume scaled by shares outstanding, and *SHOW* is a dummy variable equals to 1 for a stock mentioned or recommended on the Show and 0 otherwise. We include control variables, and firm, day of the week, month, and year fixed effects. Standard errors are clustered at the firm level.

The results reported in Panel A of Table 3 reveal that Show recommendations or mentions significantly affect the next-day turnover. A Guest interview increases next-day turnover by 0.7% which is meaningful when benchmarked to the average daily turnover of 1.15% in our sample, and an average increase of 0.9% on earnings announcement days. Focke, Ruenzi, and Ungeheuer (2020) find that a 1-standard deviation increase in TV advertisements increases turnover by only 0.1%. The interaction terms between abnormal active attention and the Show dummy are significant and positive for both SEC EDGAR and Stocktwits [columns (3) to (6)]. The interactions are significant and positive for shortened windows [columns (4) and (6)], and the magnitudes of the coefficients indicate that the active attention channel effect is concentrated around the Show. The significant and positive incremental effects of the active attentions of both institutional and retail investors are stronger for retail investors (see SA Table SA.11).<sup>18</sup> The results for retail investors are consistent with the finding of Barber, Lin, and Odean (2019) that the buy-sell order imbalance of individual investors significantly increases on the day after a stock is mentioned on the Show. In panel B of Table 3, we find that while the Show's impact decreases after day 1, it is still significantly positive on the next 7 days.

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<sup>17</sup> We obtain similar baseline findings after excluding a window from 3 days before to 7 days after earnings announcement dates (see SA Table SA.9).

<sup>18</sup> We exclude Mondays that capture the longer window for Friday shows from specifications (3) to (6). The results for Mondays with different specifications are consistent with the main results, except for the interaction between the abnormal attention on EDGAR and the *SHOW* Dummy which is not significant (see SA Table SA.12). The results also are consistent with our baseline results when we exclude earnings announcement periods (see SA Table SA.13).

[Insert Table 3 about here]

## 5.2 Trading activities of institutional investors

While the Show significantly affects the active attention of institutional investors, we now investigate the Show's effect on the transactions of institutional investors using model (2) and the ANcerno database. We use the abnormal institutional order flow ( $AlnOF_{i,t}$ ) and abnormal institutional volume ( $AlnVOL_{i,t}$ ) as the dependent variables. We find that the Show's effect on the abnormal flows of institutional investors ( $AlnOF_{i,t}$ ) is insignificant (see Table 4) but significant for  $AlnVOL_{i,t}$  [see columns (5) to (7)].<sup>19</sup> This is similar to the finding of Davis, Khadivar, and Walker (2021) who find abnormal trading of institutions around informative takeover rumors, and insignificant abnormal order flows after speculative rumors. Thus, while institutional investors are neither net buyers nor sellers after Show recommendations/mentions and thus not noise traders on balance, they increase their total trading activities due to the increased active attention associated with the Show.

[Insert Table 4 about here]

## 5.3 Retail investor holdings

Papers using the holdings of users on the Robinhood trading platform to examine the behavior of retail investors include: herding behavior among Robinhood users where intense buying leads to an -4.7% abnormal return over the next 20 days (Barber, Odean, and Schwarz, 2020); a significant response of Robinhood users to non-ESG press releases or earnings announcements but not ESG (Environmental, Social, and Governance) disclosures (Moss, Naughton, and Wang, 2020); the tendency of Robinhood users to favor stocks with high past volumes and for their aggregate holdings to not underperform standard 1-, 4- and 5-factor asset pricing benchmarks (Welch, 2022); and the hourly turnover of retail investors' holdings of Robinhood being significantly affected by TV advertisements (Liaukonytė and Žaldokas, 2021). In this section, we add to this literature by showing that stock recommendations/mentions on the Show can significantly affect the holdings (portfolio choices) of Robinhood users.

We test the Show's effect on the number of users holding the stock using Robinhood's popularity index (PI) over its availability from May 2018 to August 2020. Since the Show airs after the 6 pm market close, we expect and find a significant jump in the number of Robinhood investors only on the day after the day of the Show in Figure 2. Consistent with our prior evidence, we find that the average increase in

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<sup>19</sup> We also use  $AlnOF_{i,t}$  for each type of institutional investor (i.e., plan sponsors or investment managers),  $AlnOF_{i,t}$  over longer horizons after the Show ([1,2], [1,5] and [1,10]), and Order imbalance =  $(Buy - Sell)/(Buy + Sell)$ . The results are consistent with the main analysis and are available upon request.

the PI is 2.09% for Guest interviews compared to 1.02% for positive mentions/ recommendations on the Show.

[Insert Figure 2 about here]

We then estimate regression (2) when our dependent variable is the daily change of a stock's popularity index (PI). We find a highly significant impact of Guest interviews on the next-day's PI among Robinhood users (Panel A in Table 5) with and without the addition of lagged changes in PI and control variables. Guest (primarily CEO) interviews increase the next-day's PI by 1.6% (see column (2) in Panel A). Interactions of the Show dummy with pre-market-open investor active attention on Stocktwits (*PMIAAS*) excluding Mondays,<sup>20</sup> which are significant and positive (see column (3) in Panel A), demonstrate that the abnormal active attention induced by a Show interview is a channel that links the Show to the behavior of retail investors. The effect of abnormal active attention measured during the Show is significant and positive which suggests that much of the active, attention-induced trading is attributable to the increase in abnormal active attention during this period. The Show's effect on the change in PI is also significantly positive for market close to next-day's market open and next-day's market open to that day's close (see columns (5) and (6), respectively of Panel A).

The first day positive effect of a Guest interview on PI becomes negative for days 2 through 7 and the aggregate effect fades away in 10 days (see Panel B of Table 5). We find that Show mentions, regardless of their direction or the time devoted to a particular stock, significantly increase the holdings of Robinhood users by an average of 0.528% (see panel B, SA Table SA.15). We also find a stronger effect of positive versus negative recommendations for all Show segments [column (2) versus column (3)], Featured stocks [column (4) versus column (5)], and Discussed and Lightning round stocks [column (6) versus column (7)].<sup>21</sup>

[Insert Table 5 about here]

#### 5.4 Short sales of institutional and retail investors

While short sellers are mainly institutional investors according to Boehmer, Jones, and Zhang (2008) due to relatively lower short-sale frictions, retail investors represent a small but material percentage of total short sales. In this section, we estimate model (2) where the dependent variables are the Short-sale ratios for on and off-exchange shorts and for retail investors. We observe that the short-sale ratios based

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<sup>20</sup> Only data regarding attention to Stocktwits are used since query information for SEC EDGAR is not available after July 2017. The results for Mondays are provided in SA Table SA.12.

<sup>21</sup> Consistent results are found for the Show's impact on retail investor's holdings for the window [-3,7] around earnings announcement days (see SA Table SA.13).

on the Cboe exchanges data (FINRA all and retail subset, and combined Cboe and FINRA) data decrease (increase) significantly after a Guest interview (see columns (2), (4), (6) and (7), respectively, of Table 6). As an illustration of their importance, the significant increase of 0.85% (0.74%) reported in column (4) [column (6)] of Table 6 for the total (retail) ratios of off-exchange short sales based on all (subset of) FINRA data are economically significant given that the average off-exchange ratios of total and retail short sales in our sample are 43% and 2.9%, respectively.

[Insert Table 6 about here]

Further analyses suggest that institutional investors exhibit stronger contrarian behavior than retail investors although both groups include contrarian investors. The short-sale ratio not differentiated between institutional and retail investors based on all FINRA data only changes (negatively) significantly after a sell or unfavorable mention/recommendation for Featured stocks and stocks in the Discussed and Lightning rounds (Panel B, SA Table SA.18). The retail short-sale ratio based on a subset of FINRA data increases significantly after both buy and sell recommendations and (un)favorable mentions of Featured stocks and positive/negative mentions/recommendations in the Discussed and Lightning rounds of the Show (Panel C, SA Table SA.18). In contrast, the short-sale ratio based on the Cboe exchanges data decreases significantly after Buy recommendations, (un)favorable mentions/recommendations of Featured stocks, and negative mentions/recommendations in the Discussed and Lightning rounds of the Show (Panel D, SA Table SA.18). The significant positive effect of the Show on the retail short-sale ratio is significantly attenuated when the Show dummy is interacted with abnormal active attention measured using EDGAR, Retail IPs, and Stocktwits (Panel E, SA Table SA.18). While the Show has an insignificant effect on the short-sale ratio based on FINRA data, the effect is significantly positive when the Show dummy is interacted with abnormal active attention measured using the institutional IPs (Panel E, SA Table SA.18).

## 6. SHOW'S EFFECT ON ABNORMAL STOCK RETURNS

We now examine the effect of the Show's recommendations/mentions on stock prices using an event study approach. Abnormal returns and their cumulations are derived from a five-factor model (Fama and French, 2014) whose factors are market excess return, size, value, profitability, and investment. Abnormal return ( $AR_{i,\tau}$ ) for day  $\tau$  relative to the date (0) the stock is mentioned or recommended on the Show is the actual return minus the expected return where the latter is computed using the estimated factor beta coefficients over the estimation window  $[-230, -30]$ . Average Abnormal Return ( $AAR_{s,\tau}$ ) is the average of the AR for the firms in sample  $s$  for day  $\tau$ .  $CAAR[v, w]_s$  (Cumulative Average Abnormal Return) is the sum of the AAR over the window  $[v, w]$  for firm-events in subsample  $s$ .  $CAR[v, w]_i$  (Cumulative Abnormal Return) is the sum of the AR over the window  $[v, w]$  for firm-event  $i$ . Since the Show airs at the



market close, any effect of the Show on prices/returns in the absence of information leakage is expected to start on day  $\tau = 1$ . Show recommendations/mentions during the last 20 days are excluded from the abnormal return analysis.

We observe a similar pattern of an immediate spike and subsequent price reversal for all Show segments in Figure 3 and Panel A of Table 7. The CAAR of +60 (+86) basis points (bp) on the day after a Guest interview (positive Feature Stock recommendation) reverses in the following days to become -95 (+13) bp by day 20. Consistent with our previous findings, the CAAR for a Lightning/Discussed round recommendation with its lower firm media exposure is smaller. The significantly positive (negative) CAAR [-10,-1] for buy (sell) signals in the Featured and Lightning/discussed rounds can be explained by viewers asking questions about recent movers and the tendency of Cramer to deal with recent winners/losers. To better understand the mechanism behind the Show's effect, we condition the Guest interviews on the Guest frequency from the same firm in SA Figure SA.6. While the effect of the first interview of a firm Guest is strongest, the CAAR [1,20] is insignificant most likely due to the prudence of firm insiders not to reveal non-public information during their interviews.

[Insert Figure 3 about here]

We estimate the following model including control variables to examine the determinants of the effect of the Show on the CARs over different post-Show horizons:

$$CAR_{i,\tau} = a + \beta_0 SHOW_{\tau-1} + \gamma Controls + fixed\ effects + \epsilon_{i,\tau} \quad (3)$$

$SHOW_{\tau-1}$  is a different dummy variable for each segment of the Show. The control variables are as defined in the Appendix and described with the associated results in Table 7. They are *Abnormal attention <sub>$\tau$</sub>* , *Abnormal attention <sub>$\tau$</sub>  \*  $SHOW_{\tau-1}$* , *Market return <sub>$\tau-1,\tau-29$</sub>* , *Size*, *CAR <sub>$\tau-10,\tau-1$</sub>* , and *Retail ownership*. Firm, day of the week, month, and year fixed effects also are included. Standard errors are clustered at the firm level.

We report the results for the CAR for Guest interviews for various post-Show periods in Panel B of Table 7 and for the other Show segments in SA Table SA.20. The cross-sectional average of the CAR (ACAR) following Guest interviews reported in Panel B of Table 7 is a significant +47 bp for window [1,1] and becomes insignificant for window [1,20]. The interaction term between abnormal active attention and Guest interview is significantly positive for CAR [1,1]. This reinforces the belief that the intensity of the costly acquisition of information by investors can be used as a measure of the perceived benefits of the Show's recommendations. Based on the SA Table SA.20 results, we again find that the CARs are affected only short-term by Show recommendations/mentions. The significantly positive effect of buy (sell) recommendations on the Discussed/Lightning rounds on CAR [1,20] suggests that they are

potentially useful contrarian signals. Overall, the instant AR spike and its subsequent dissipation is consistent with the lack of an informational shock associated with the Show, a temporary increase in price pressure due to increased noise trading, and its subsequent dissipation assisted by contrarian trades by some investors.

[Insert Table 7 about here]

To further disentangle the effect of the active attention of the two investor groups on post-Show returns, we estimate the following model for next-day CAR[1,1]:

$$CAR_{i,t} = \alpha + \beta_0 SHOW_{t-1} + \beta_1 InstDummy_{i,t} + \beta_2 RetailDummy_{i,t} + \beta_3 SHOW_{t-1} * InstDummy_{i,t} + \beta_4 SHOW_{t-1} * RetailDummy_{i,t} + \beta_5 SHOW_{t-1} * InstDummy_{i,t} * RetailDummy_{i,t} + \gamma Controls + fixed\ effects + \epsilon_{i,t} \quad (4)$$

Where *Inst* (*Retail*) Dummy variable equals 1 if the abnormal institutional (retail) active attention is higher than 94% of the firm's daily abnormal active attention during the last 30 days and 0 otherwise. Thus,  $\beta_0$ ,  $\beta_3$ ,  $\beta_4$  and  $\beta_5$  capture the effects of the Show without the extreme active attention of either group, the incremental effect of the extreme active attention of only institutional investors, only retail investors, and the extreme active attention of both groups, respectively. SHOW is significant in all columns of Table 8 and the results are consistent with the directions of recommendations/mentions. The significant coefficients of the interaction terms between the Show and only the active attention of retail investors suggest a stronger effect of the Show when retail investors pay active attention to the Show. Consistent with the conjecture that institutional investors appear to be more contrarian, we observe that the interaction terms between the active attention of institutional investors and SHOW are insignificant [columns (2 to (7))], or significant but with the opposite sign [column (1)].

[Insert Table 8 about here]

In summary and based on a more update data than previous studies, we confirm that the significant effects of the Show's stock recommendations on the next day's returns are mostly captured by the opening price (Neumann and Kenny, 2007), are subsequently reversed, and are heterogeneous since they depend on the Show segment, and the direction of recommendations (Gutierrez and Stretcher, 2015) and other controls such as the number of recommendations of the same firm on the same Show (Karniouchina, Moore, and Cooney, 2009). Using five factor-adjusted returns, we not only confirm that the cumulative factor-adjusted returns associated with the Show's recommendations are not significantly different from zero over multi-day windows (Bolster, Trahan, and Venkateswaran, 2012) but also show that such first-day returns are significantly associated with our measures of investor active attention and that buy (sell) recommendations on the Discussed/Lightning rounds appear to be potentially useful contrarian signals.

## 7. SOME FURTHER TESTS

### 7.1 Pre-Show effects

To this point, we have focused on the Show's effect after the Show's start. We now examine the behavior of abnormal active attention and abnormal returns before Guest interviews on the Show which has not been examined by previous studies. We focus on Guest interviews since we can attribute part of the pre-trends in the active attention indexes and financial variables of the recommended stocks in other segments of the Show to confounding events, as the host comments on current events and trending stocks during the day. However, Guest interviews are scheduled in advance and are unlikely to be correlated with confounding events during the day of the Show. Nevertheless, the Show sometimes promotes incoming Guest interviews on social media as depicted in SA Figure SA.7 to bolster Show audiences. To further analyze the effect of the Show on abnormal active attention, we first measure the average abnormal active attention to a stock for every 2-hour interval for 24 hours around a Guest interview as depicted in SA Figure SA.8.<sup>22</sup> While abnormal active attention on Stocktwits spikes at the Show's start, levels of abnormal active attention are elevated before the Show. To formally test their effect, we measure the Show's effect on abnormal active attention for four 2-hours intervals pre-Show (i.e., [10:00,12:00], [12:00,14:00], [14:00,16:00], [16:00,18:00]) and from the Show's start (i.e., [18:00, 20:00]) using model (1) in SA Table SA.21. While the active attention index levels on both platforms are elevated pre-Show, there is a spike in abnormal active attention from the start of the Show.

We next test the Show's effect on the abnormal return on  $D_0$  (day of the Guest interview) and  $D_{-1}$  (day before the Guest interview). Since the Show airs at 6:00 pm on weekdays after the market close, abnormal returns on these days measure the effects before the Show. If the abnormal active attention index level is already elevated pre-Show due to announcements of incoming interviews or confounding events, interaction terms between an active attention index and the SHOW Dummy cannot identify the effect on abnormal returns attributable to the induced active attention by a Show appearance. To deal with this possibility, we first set the expected abnormal investor active attention ( $EAIAA_{i,t}$ ) equal to the daily abnormal investor active attention ( $DAIAA_{i,t-1}$ ) during the last 24 hours before the Show. Then, we disentangle the abnormal active attention indexes into surprised abnormal investor active attention ( $SAIAA_{i,t}$ ) and expected abnormal investor active attention ( $EAIAA_{i,t}$ ) using the  $SAIAA_{i,t} = PMAAI_{i,t} - EAIAA_{i,t}$  where  $PMIAA_{i,t}$  measures abnormal active attention from 6:00 pm on day t-1 to 9:00 am on day t.  $SAIAA_{i,t}$  now measures the change in an abnormal active attention index for the last 24 hours before the

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<sup>22</sup> Although the Show was rebroadcasted later in the evening at 11:00 pm on occasion, the effect of such rebroadcasts on investor active attention is not noticeable in SA Figure SA.8. CNBC's response to our query for a chronological listing of Show rebroadcasts was: "At this time, a schedule for the past shows over the years is not available".

Show. Based on the results reported in SA Table SA.22 for a regression model like (3), we find that the AR is significant and positive on the day of the interview, while it is insignificant on the day pre-Show. We then test the incremental effect of abnormal active attention (surprised or expected) on the AR after the Guest interview on the Show. We find that while the interaction terms for expected abnormal active attention to SEC EDGAR are not significant, the interaction terms for surprised abnormal active attention significantly affect the abnormal return on the day after the Guest interview. We find that the interaction terms for both surprised and expected abnormal active attention using indexes based on Stocktwits significantly affect abnormal returns.

## **7.2 Show's effect after controlling for other pre-Show abnormal news**

One concern regarding the Show's effect on the active attention indexes is the confounding effect of other news that can also affect the active attention of investors to the Show. To address this concern, we add three control variables to our baseline model. We use News publication, which is defined as the "total number of stories for the parent companies" from the Bloomberg terminal. This measure includes all news content except for the news wires. We calculate the Daily (Weekly) Abnormal news as the logarithm of the ratio of the daily (weekly) number of new items regarding a firm over the median number of new items on the same weekday (over a week) during the last 8 weeks. We also use abnormal institutional investor active attention (AInIAA) from the Bloomberg platform to capture the spike in the active attention of institutional investors (Ben-Rephael et al., 2017). AInIAA is a dummy variable equal to one if the abnormal institutional active attention is higher than 94% of the firm's daily abnormal institutional active attention during the last 30 days. The results reported in SA Table SA.13 show that the effect of the Show is still significant and consistent with our main analysis.

## **7.3 Heterogeneity in the Show's effect**

We test our conjectures that the Show's effect on the active attention to firms may differ based on a firm's information environment as proxied by firm size, turnover, number of analysts and the ratio of retail ownership, and specific events (potential moderators) that may moderate the Show's impact on investor active attention such as Fridays (start of the week-end), financial crisis, Olympics, extreme news pressure, and extreme market returns.<sup>23</sup> The results are provided in SA Table SA.24. For Guest interviews, we find a smaller (bigger) effect of the Show on abnormal active attention to EDGAR for firms with lower turnover (firms with more Show recommendations), and a stronger effect on the abnormal active attention to Stocktwits for smaller firms, with a lower number of analysts, and extreme market returns.

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<sup>23</sup> See Section SA.2 in the Supplementary Appendix for definitions of variables used in the heterogeneity test and a more detailed discussion of the results.

While we observe that all the potential moderators have a significant (and expected) effect on investor active attention, the Show's significant effect on investor attention remains.

## **8. CONCLUSION**

In this paper, we study the effect of the Mad Money Show on the stock market by focusing on active attention as a channel for measuring the impact of the Show and its potential influencer on the active attention of investors. The number of queries on SEC EDGAR and the volume of posts on Stocktwits are used as direct measures of the channel used for Show-induced active attention and information acquisition by viewers of the Show. We find that the Show significantly affects the attention of retail and to a lesser extent, institutional investors. The induced active attention generated by the Show subsequently increases the turnover in the following days, affects short-sale activity of predominantly institutional investors, impacts the trading activities of institutional investors and portfolio holdings of retail investors, and significantly affects post-event abnormal returns. The Show's effect on post-event abnormal returns is short-term as it either becomes insignificant over the 20 days after the Show or changes sign to become significantly negative (positive) for the buy (sell) recommendations made on the Discussed/Lightning rounds of the Show. This abnormal-return behavior is consistent with the initial impact of noise trading beginning offset with subsequent trading by more informed contrarian investors.

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## Appendix: Definitions of Variables and Abbreviations

Variable	Description	Source
$SHOW_t$	A dummy variable equal to 1 if the Show mentions stock $i$ on day $t$ and equal to 0 otherwise.	Various sources
$VIX_{t-1}$	Lagged Chicago board options exchange volatility index.	Chicago Board Options Exchange (WRDS)
<i>Market return</i>	Holding-period return of each Stock Market Index (NYSE/AMEX/NASDAQ/ARCA) over the past month.	CRSP
<i>Analyst</i>	Number of analysts following the firm plus one.	I/B/E/S
<i>Earnings date</i>	Dummy variable equal to 1 if the day is the day of the earnings announcement of the firm and 0 otherwise.	I/B/E/S
$Return_{t-1}$	Stock return over the previous day.	CRSP
Market Cap $_{t-1}$	Logarithm of a firm's market capitalization.	Computed
Turnover $_{t-1,t-29}$	Trading volume over the last four weeks divided by shares outstanding.	CRSP
$Return_{t-1,t-29}$	Stock's holding-period return over the last four weeks.	CRSP
Popularity index (PI)	Number of Robinhood users who held the stock in their portfolio.	robintrack.net
$DIAA_{i,t}$	24-hour ('daily') investor active attention for a stock which is mentioned on a Show using data from SEC EDGAR or Stocktwits for a window beginning at the 6 pm start of the Show in which the stock is mentioned to the 6 pm beginning of the next Show.	SEC EDGAR and Stocktwits
$PMIAA_{i,t}$	Pre-market investor active attention using data from SEC EDGAR or Stocktwits for a stock which is mentioned on a Show for a 15-hour window beginning at the 6 pm start of the Show in which the stock is mentioned to 9 am on the next day.	SEC EDGAR and Stocktwits
$ShortSale\ ratio_{i,t}$	Short-sale ratio, which is the volume of shares shorted at Cboe exchanges (off-exchanges) to the total CRSP share volume (total off-exchange volume) for Cboe (FINRA).	Cboe and FINRA
$RetailShortSale_{i,t}$	Retail short-sale ratio is the volume of shares shorted by retail investors to the total off-exchange volume for FINRA. Short-sale Transactions with sub-penny fractions between \$0.0001 and \$0.0040 are classified as short sales initiated by retail investors.	FINRA

### Abbreviations:

**2HAIAA:** Two-hour Abnormal Investor Active Attention

**AAR:** Average (cross-sectional) Abnormal Return for firms in a specific sample

**AInIAA:** Abnormal Institutional Investor Active Attention

**AInOF:** Abnormal Institutional Order Flow

**AInVOL:** Abnormal Institutional Volume

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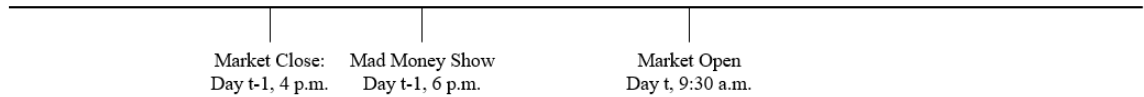
**AR:** Abnormal Return  
**AReIAA:** Abnormal Retail Investor Active Attention  
**bp:** Basis Points  
**CAAR:** Cumulative Average Abnormal Return of the sum of the AAR over a specific window  
**CAR:** Cumulative Abnormal Return – sum of ARs for an event over a specific window  
**Cboe:** Groups that owns the Chicago Board Options Exchange and is the stock exchange operator BATS  
Global Markets which operates four US equity markets  
**DAIAA:** Daily Abnormal Investor Active Attention  
**EA:** Earnings Announcements  
**EAIAA:** Expected Abnormal Investor Active Attention  
**EDGAR:** Electronic Data Gathering, Analysis  
**FINRA:** Financial Industry Regulatory Authority  
**IP:** Internet Protocol address  
**PI:** Popularity Index of Robinhood  
**PMIAA:** Pre-Market-open Investor Active Attention (a Show's end to next-day's market open)  
**PMIAAS:** Pre-Market-open Investor active attention on Stocktwits PMIAAS  
**RH:** Robinhood  
**SA:** Supplementary Appendix  
**SAIAA:** Surprised Abnormal Investor Active Attention  
**SEC:** Securities and Exchange Commission

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**Figure 1: Timeline of the Show and measures of abnormal active attention**

We show the market open and close and the timing of the Show in Panel A, the period for measuring daily abnormal investor active attention (DAIAA) running from 6:00 pm (start of the Show) to 6:00 pm on the next day in Panel B, the period for measuring pre-market investor active attention (PMIAA) running from the start of the Show (6:00 pm) until the market open on the next day (9:00 am) in panel C, and the period to measure abnormal active attention of the 2-hours (2HAIAA) from the start of the Mad Money Show (from 6:00 pm to 8:00 pm) in Panel D.

Panel A: Timeline of the Mad Money Show and the Stock market



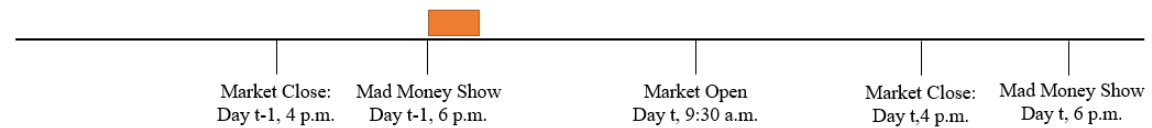
Panel B: Timeline of the daily abnormal investor active attention (DAIAA) index from 6 p.m. to 6 p.m.



Panel C: Timeline of pre-market abnormal investor active attention (PMIAA) index from 6 p.m. to 9 a.m.

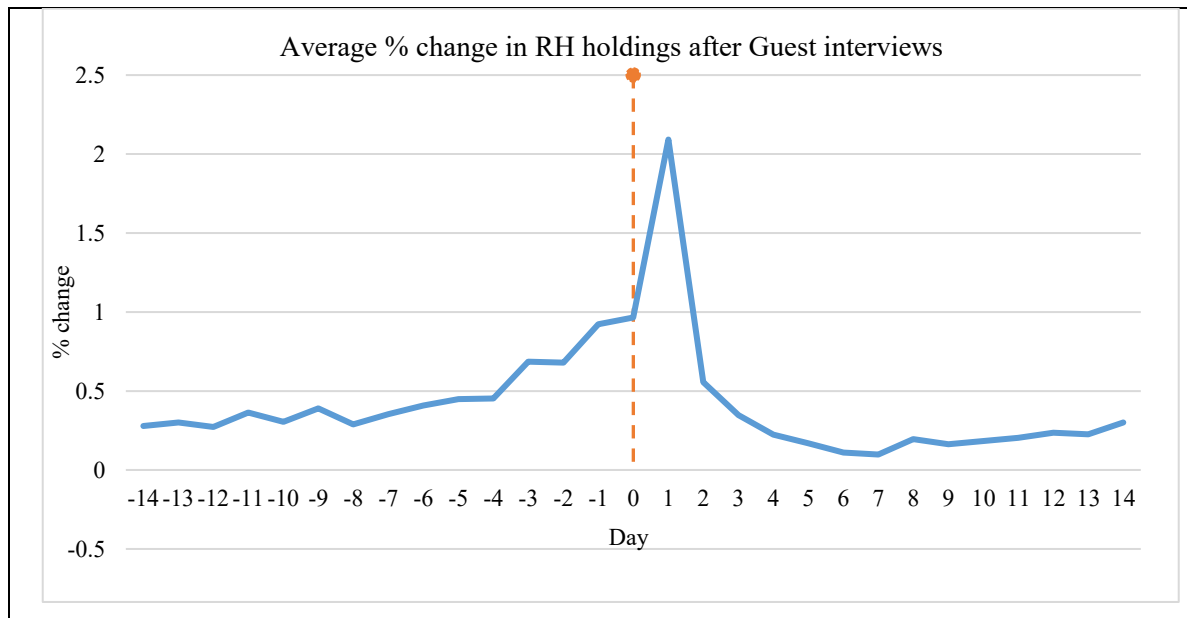


Panel D: Timeline of 2-hours abnormal investor active attention (2HAIAA) index from 6 p.m. to 8 p.m.



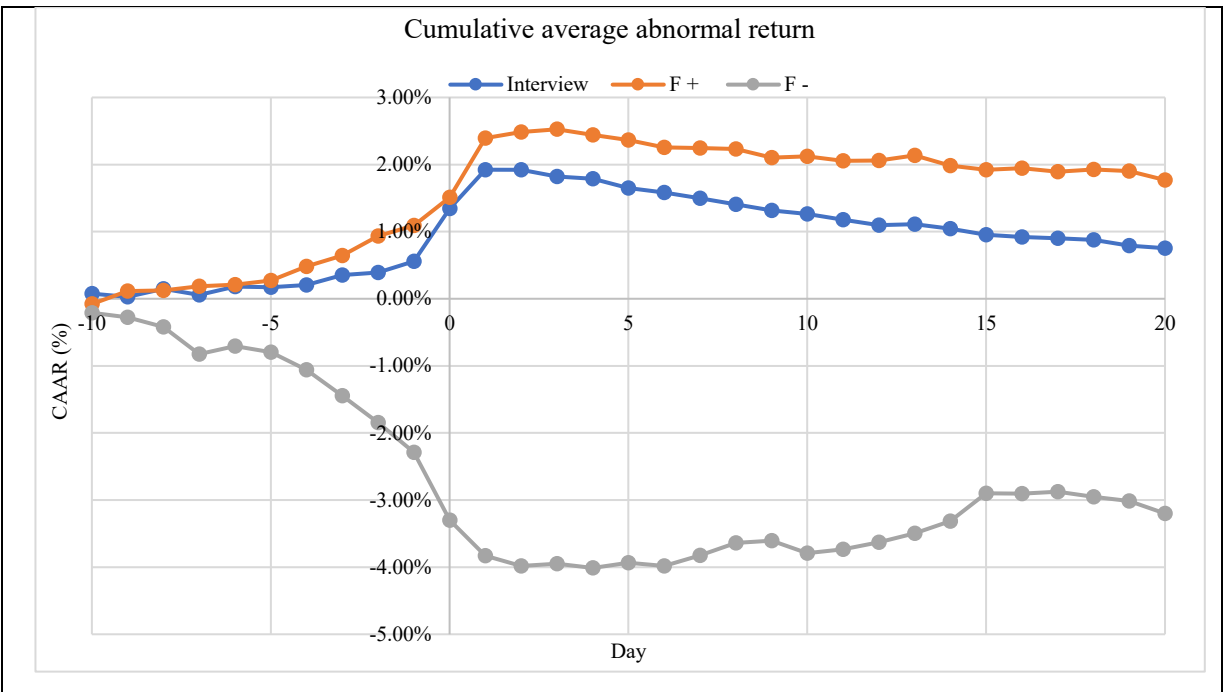
**Figure 2: Average percentage change in Robinhood PI for Guest interviews**

Robinhood popularity index (PI) is the number of Robinhood (RH) investors who own securities mentioned on the Mad Money Show. We calculate the daily percentage change in the PI where day 0 is the day the stock is mentioned on the Show. Since the Show airs at 6:00 pm every day, the effect of the Show on the popularity index is expected on the next day (Day 1). The PI data are available from May 2018 to August 2020.



**Figure 3: CAARs of recommended/mentioned stocks on the Show**

The figure shows the Cumulative Average Abnormal Returns or CAAR around the Mad Money Show. Each daily abnormal return (AR) is computed using the Fama-French five-factor model for each mentioned firm in sample  $s$  over the event window  $[-10, 20]$ . The beta coefficients, which are estimated over a 200 trading-day estimation window  $[-230, -30]$ , are used in calculating the expected returns for every relative day  $\tau$  in the window  $[-10, 20]$ . Abnormal return or  $AR_{i,\tau}$  is the difference between expected and actual returns for firm  $i$  in sample  $s$  for relative time  $\tau$ . The CAARs for the firms in sample  $s$  over various relative time windows from the base period are computed as:  $CAAR_s[T_1, T_2] = \sum_{\tau=T_1}^{T_2} AAR_{s,\tau}$ , where  $AAR_{s,\tau}$  is the average abnormal return of the firms in sample  $s$  for relative time  $\tau$ . In the graph,  $T_1 = -10$  and  $T_2$  takes on values from -10 to +20. Day 0 is the date the stock is mentioned or recommended on the Show. Since the Show airs at 6:00 pm, the first effect of the Show is on day 1. The CAAR around Guest interviews (Interview) and buy (F+) and sell (F-) recommendations in the Featured stocks segment are depicted in this figure.



**Table 1: Summary statistics**

This table reports summary statistics for the variables used in this paper. All variables are defined in the Appendix. The frequency of mentioned/recommended stock on the Mad Money Show based on the segment of the Show and the direction of a recommendation are reported in Panel A. Summary statistics of the variables are reported for all firms in Panel B. N is the number of observations. Cross-sectional t-statistics are reported in the parentheses. Significance at the 1%, 5%, and 10% levels is indicated by \*\*\*, \*\*, and \*, respectively.

<b>Panel A: Show recommendations (R) or mentions (M)</b>							
	Sell R	Neg. M	Hold / Neutral	Pos. M	Buy R	Total	Percentage
Discussed stock	539	2,308	117	7,446	5,544	15,954	33.0%
Featured stock	268	431	191	1,384	2,084	4,358	9.0%
Guest interview	2	12	55	838	2,477	3,384	7.0%
Lightning round	1,668	7,038	138	11,886	3,910	24,640	51.0%
Total	2,477	9,789	501	21,554	14,015	48,336	
Percentage	5.1%	20.3%	1.0%	44.6%	29.0%		100%
<b>Panel B: Summary Statistics</b>							
Variable	N	Mean	Std Dev	Minimum	Maximum		
Abnormal active attention EDGAR	8,703,794	-0.003	0.746	-2.015	1.946		
VIX	8,940,898	19.269	9.490	9.140	80.860		
Market Return $t-29, t-1$	8,884,791	0.006	0.041	-0.151	0.100		
Analyst	8,232,220	10.543	7.637	1	57		
Retail ownership	6,857,439	0.351	0.281	0	1		
Return $_{t-1}$	5,827,518	0.000	0.026	-0.084	0.090		
Ln (Market Cap $_{t-1}$ )	5,827,413	21.523	1.704	11.441	27.531		
Ln (Turnover $t-1, t-29$ )	5,778,521	-1.774	0.810	-4.183	0.226		
Return $_{t-1, t-29}$	5,779,095	0.008	0.120	-0.367	0.422		
Ln (Turnover)	5,830,500	-4.883	0.928	-7.658	-2.558		
Robinhood holding	720,140	7,347.820	22,505.560	25	164,561		
Change in Robinhood PI	715,154	18.971	113.342	-197	860		
% Change in Robinhood PI	710,739	0.250	1.469	-3.208	8.429		
Off-exchange short-sale ratio	6,280,646	0.428	0.167	0	1		
Retail short-sale ratio	6,176,111	0.030	0.040	0	1		
On-exchange short-sale ratio	6,484,850	0.083	0.047	0	0.30		
Institutional order flows (% of size)	1,960,233	0.0045	0.1618	-0.6715	0.7453		
Institutional Volume (% of size)	1,960,233	0.1214	0.2290	0.0001	1.4800		

**Table 2: The effect on abnormal active attention of a stock being mentioned on the Show**

This table reports the effects on investor active attention from a firm being mentioned on the show, Mad Money. The dependent variable, Daily abnormal investor active attention ( $DAIAA_{i,t}$ ), is the logarithm of the ratio of the number of queries on SEC EDGAR (Stocktwits posts) about a firm from 6:00 pm (Show's start time) to the next day's Show 6:00 pm start over the median of the number of queries for the same window during the last 8 weeks for the same firm. The  $SHOW_t$  dummy variable is based on Guest interviews representing stock  $i$  on day  $t$ . All non-robot queries on EDGAR are counted in columns (1) to (3), only institutional IPs in column (4) and only retail IPs in column (5) to calculate  $DAIAA_{i,t}$ .  $VIX_{t-1}$  is the lagged Chicago board options exchange volatility index.

$Market\ return$  is the holding-period return of the Stock Market Indexes (NYSE/AMEX/NASDAQ/ARCA) over the past month.  $Analyst$  is the number of analysts following the firm plus one.  $EA$  is a dummy variable equal to 1 for earnings announcement days and 0 otherwise.  $Retail\ ownership$  is the percentage of shares outstanding held by retail investors determined by one minus the percentage of institutional ownership.  $Return_{t-1}$  is the stock return over the last day.  $Market\ Cap_{t-1}$  is the logarithm of a firm's market capitalization. Turnover  $_{t-1,t-29}$  is the trading volume over the last four weeks divided by shares outstanding.  $Return_{t-1,t-29}$  is the stock holding period return over the last four weeks. Control variables results are suppressed in Panels B & C due to their similarity to those reported in Panel A. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: Daily abnormal investor active attention to Guest interviews</b>								
	EDGAR (N=11,865,791)					Stocktwits (N=12,024,285)		
	(1)	(2)	(3)	Inst (4)	Retail (5)	(6)	(7)	(8)
$SHOW_{t-1}$	0.394** (17.04)	0.304** (14.97)	0.236*** (11.03)	0.276*** (5.85)	0.312*** (11.15)	1.272** (25.98)	1.017*** (25.42)	0.991*** (22.09)
$Abnormal\ active\ attention_{t-1}$		0.273** (121.11)	0.327*** (102.94)	0.148*** (96.23)	0.224*** (115.94)		0.210*** (117.90)	0.206*** (111.87)
$VIX_{t-1}$			-0.001*** (-10.23)	-0.001 (-1.51)	-0.001 (-3.02)			-0.005*** (-23.78)
$Market\ return_{t-29,t-1}$			1.021*** (-60.78)	-0.611*** (-19.63)	-1.191*** (-49.28)			0.398*** (9.91)
$Analyst$			-0.013*** (-9.75)	-0.068*** (-14.04)	-0.022*** (-9.29)			-0.081*** (-16.57)
$EA$			0.517*** (66.98)	0.633*** (45.24)	0.676*** (67.08)			2.450*** (146.5)
$Retail\ ownership$			0.021*** (5.14)	0.013 (1.17)	0.050*** (8.09)			0.029*** (2.58)
$Return_{t-1}$			1.288*** (8.48)	1.671*** (6.96)	1.638*** (8.05)			0.577*** (8.88)
$Ln(Market\ Cap_{t-1})$			0.012*** (20.1)	-0.041*** (-20.18)	0.014*** (13.69)			-0.002 (-1.47)
$Ln(Turnover_{t-1,t-29})$			0.035*** (17.56)	0.020*** (5.2)	0.041*** (13.61)			0.089*** (25.54)
$Return_{t-1,t-29}$			-0.015*** (-2.65)	0.029*** (3.17)	-0.031*** (-3.78)			0.086*** (4.71)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.005	0.079	0.113	0.041	0.066	0.005	0.049	0.090



**Table 3: Impact on share turnover**

This table reports the impact on turnover from a firm being mentioned on the show, Mad Money. The dependent variable is *Turnover*, which is the ratio of trading volume scaled by shares outstanding.  $SHOW_t$  is a dummy variable equal to 1 for a Guest interview representing stock  $i$  on day  $t$  and 0 otherwise. In Panel A, *Abnormal attention* in columns (3) and (5) are pre-market investor active attention (PMIAA) to EDGAR from 6:00 pm (start of the Show) to 9:00 am (next day's Market open). The *Abnormal attention* in columns (4) and (6) are pre-market investor active attention (PMIAA) to Stocktwits during the 2-hour (2H) window from 6:00 pm to 8:00 pm (i.e. from the beginning of the Show). The data in columns (1) and (2) are from 2006 to 2020. Due to the availability of data from EDGAR (2003 to Q2-2017) and Stocktwits (2010-2021), we focus on 2010 to Q2-2017 (the overlap) in columns (3) to (6). In Panel B, we test the effect of Guest interviews from day=2 (column 1) to day=7 (column 6) after the Show. Control variable definitions are provided in the Appendix. Control variables are size, return over the last month, the number of analysts, a dummy for earnings announcement, and return on the last day. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: The effect of Guest interviews on Turnover</b>						
	(1)	(2)	EDGAR (3)	EDGAR- 2H (4)	Stocktwits (5)	Stocktwits- 2H (6)
$SHOW_{t-1}$	0.009*** (13.23)	0.007*** (10.9)	0.006*** (7.71)	0.007*** (8.3)	0.004*** (6.2)	0.004*** (5.92)
<i>Abnormal active attention<sub>t</sub></i>			0.0006*** (37.26)	0.0001*** (17.92)	0.0007*** (38.89)	0.0015*** (32.91)
<i>Abnormal active attention<sub>t</sub></i> * $SHOW_{t-1}$			0.0016* (1.88)	0.0009** (2.41)	0.0013*** (4)	0.0010*** (2.91)
<i>Control Variables</i>	No	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i># of obs.</i>	7,345,749	5,641,930	4,622,449	4,622,449	4,622,449	4,622,449
<i>R-squared</i>	0.462	0.517	0.507	0.506	0.510	0.512

<b>Panel B: The effect of Guest interviews on subsequent Turnover (N = 11,529,777)</b>						
	Day+2 (1)	Day+3 (2)	Day+4 (3)	Day+5 (4)	Day+6 (5)	Day+7 (6)
$Guest\ interview_{t-1}$	0.0028*** (5.31)	0.0019*** (5.44)	0.0018*** (3.65)	0.0023*** (5.10)	0.0020*** (4.68)	0.0019*** (4.64)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.499	0.499	0.499	0.499	0.499	0.499

**Table 4: The impact of Show mentions on institutional trading**

This table reports the impact on institutional trading from a firm being mentioned on Mad Money using data from the ANcerno database. The dependent variables are Abnormal institutional order flow ( $AlnOF_{i,t}$ ) in columns (1)-(4) and Abnormal institutional volume ( $AlnVOL_{i,t}$ ) in columns (5)-(8).  $AlnOF_{i,t}$  ( $AlnVOL_{i,t}$ ) is  $InOF_{i,t}$  ( $InVOL_{i,t}$ ) minus the average daily institutional order flow over the [-90, -30] window.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise in columns (1), (2), (5), and (6). Positive mentions/recommendations of Featured stocks are used in columns (3) and (7) and their positive counterparts in columns (4) and (8). Control variables are defined in the Appendix. Control variables are size, return over the last month, the number of analysts, a dummy for earnings announcements, and return on the last day. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	$AlnOF_{i,t}$				$AlnVOL_{i,t}$			
	(1) interview	(2) interview	(3) F+	(4) F-	(5) interview	(6) interview	(7) F+	(8) F-
$SHOW_{t-1}$	0.0055 (0.68)	0.0046 (0.57)	-0.0014 (0.32)	-0.0077 (-0.74)	0.0263*** (2.48)	0.0167* (1.66)	0.0164*** (3.31)	-0.0428 (-1.07)
<i>Control Variables</i>	No	Yes	Yes	Yes	No	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FEs</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i># of obs.</i>	1,894,305	1,748,984	1,748,984	1,748,984	2,030,325	1,886,899	1,886,899	1,886,899
<i>R-squared</i>	0.001	0.001	0.001	0.001	0.009	0.015	0.015	0.015

**Table 5: The effect on the PI for Robinhood users for stocks mentioned on Mad Money**

This table reports the results for the popularity index (PI) for Robinhood users from a firm being mentioned on Mad Money. The dependent variable is the % *daily change in the PI*.  $SHOW_t$  is a dummy variable equal to 1 for a Guest interview representing stock  $i$  on day  $t$  and 0 otherwise. In Panel A, the dependent variable is % *daily change in the PI* close to close (columns 1 through 4), close to open (column 5), and open to close during the same day (column 6). The abnormal active attention in column (3) (column 4) is pre-market investor active attention (two-hour Abnormal Investor Active Attention) to Stocktwits from 6:00 pm to 9:00 am on the next day (6:00 pm to 8:00 pm on the same day). In Panel B, the effects of Guest interviews on day=2 (column 1) to day=7 (column 6) after the Show day are tested. The % PI changes over 2-days, 5-days, and 10 days are tested in columns (7), (8), and (9). Control variables are defined in the Appendix. Control variables are size, return over the last month, number of analysts, a dummy for earnings announcements, and return on the last day. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: % Change in PI on the day after a Guest interview</b>						
	Close-Close				Close-Open	Open-Close
	(1)	(2)	(3) PMIAA	(4) 2HAIAA	(5)	(6)
$SHOW_{t-1}$	1.878*** (13.04)	1.600*** (11.08)	1.181*** (7.21)	1.145*** (6.52)	0.542*** (11.55)	0.839*** (8.41)
<i>Abnormal active attention<sub>t</sub></i>			0.271*** (3.02)	0.191*** (3.2)		
<i>Abnormal active attention<sub>t</sub> * Show<sub>t-1</sub></i>			0.037*** (23.92)	0.032*** (19.96)		
		(26.18)	(16.54)	(16.71)	(32.56)	(15.07)
<i>Control Variables</i>	No	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	587,630	587,630	474,573	474,573	587,630	587,630
<i>R-squared</i>	0.05	0.152	0.147	0.147	0.103	0.115

<b>Panel B: % Changes in PI after a Guest interview (N = 587,630)</b>									
	Day+2	Day+3	Day+4	Day+5	Day+6	Day+7	PI-2days	PI-5days	PI-10days
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$Guest\ interview_{t-1}$	-0.233*** (-3.59)	-0.010 (-0.19)	-0.063 (-1.16)	-0.061 (-1.19)	-0.101*** (-2.38)	-0.119*** (-3.02)	1.707*** (7.74)	1.273*** (3.35)	0.201 (0.39)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.149	0.149	0.149	0.149	0.149	0.149	0.148	0.172	0.172

**Table 6: The impact of Show mentions on short sales**

This table reports the impact on short sales from a firm being mentioned on Mad Money. The dependent variable is the *Short Sale ratio*, which is the volume of shares shorted on the Cboe exchanges (off-exchanges) to the total CRSP share volumes (total off-exchange volumes) using data from the Cboe (FINRA). The retail short-sale ratio is the volume of shares shorted by retail investors to the total off-exchange volume for FINRA. In column (7), the dependent variable is the sum of the volume of short sales on Cboe and FINRA to total CRSP share volumes.  $SHOW_t$  is a dummy variable equal to 1 for a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. Control variables are defined in the Appendix. Control variables are size, return over the last month, number of analysts, a dummy for earnings announcements, and return on the last day. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	(1) Cboe	(2) Cboe	FINRA				(7) Cboe+FINRA
			(3)	(4)	(5)	(6)	
			Total	Total	Retail	Retail	
$SHOW_{t-1}$	-0.001 (-0.75)	-0.004*** (-3.46)	0.018*** (4.19)	0.008** (1.84)	0.007*** (9.95)	0.007*** (9.27)	0.019*** (6.64)
<i>Control Variables</i>	No	Yes	No	Yes	No	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FEs</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i># of obs.</i>	6,484,850	5,208,441	6,280,646	4,622,599	6,17,611	4,572,155	4,596,798
<i>R-squared</i>	0.83	0.84	0.871	0.874	0.368	0.378	0.878

**Table 7: CAAR and CAR determinants for stocks recommended/mentioned on the Mad Money**

This table reports the *Cumulative Average Abnormal Returns (CAAR)* over various windows for firms mentioned/recommended on Mad Money in Panel A and the determinants of Cumulative Abnormal Returns (CARs) in Panel B. Both CAAR and CAR are use the  $AR_{i,\tau}$  computed as the actual minus expected return for firm  $i$  on day  $\tau$  relative to event day 0. Each  $AR_{i,\tau}$  is computed using the Fama-French five-factor model and their beta coefficients estimated over the estimation window  $[-230, -30]$ .  $CAAR[v:w]_s = \sum_v^w AAR_{i,\tau}$  is the sum of the daily cross-sectional Average Abnormal Returns ( $AAR_{i,\tau}$ ) for each day  $\tau$  in the window  $[v,w]$  for all the stocks in subsample  $s$ .  $CAR[v:w]_i = \sum_v^w AR_{i,\tau}$  is the sum of the daily ARs over the window  $[v,w]$  for stock  $i$ 's mention/recommendation on the Mad Money.  $SHOW_t$  is a dummy variable equal to 1 for a Guest interview representing stock  $i$  on day  $\tau$  and 0 otherwise. Events with any Show recommendations or mentions in the previous 20 days are deleted. In Panel B, *Abnormal attention* in columns (4) to (6) [column (7) to (9)] of Panel B is pre-market investor active attention (PMIAA) to SEC EDGAR (Stocktwits) from 6:00 pm to 9:00 am on the next day.  $VIX_{t-1}$  is the lagged Chicago board options exchange volatility index. *Market return* is the holding-period return of the Stock Market Indexes (NYSE/AMEX/NASDAQ/ARCA) over the past month. *Analyst* is the number of analysts following the firm plus one. *Retail ownership* is the percentage of shares outstanding held by retail investors determined by one minus the percentage of institutional ownership.  $Market\ Cap_{\tau-1}$  is the logarithm of a firm's market capitalization.  $CAR_{\tau-10,\tau-1}$  is Cumulative abnormal return from  $\tau-10$  to  $\tau-1$ . All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

Panel A: Cumulative average abnormal return (CAAR[v:w])						
Variable	N	[1,1]	[1,2]	[1,20]	[-10,-1]	[-10,20]
<i>Guest interview</i>	2215	0.60%*** (9.04)	0.56%*** (6.88)	-0.95%*** (-4.30)	1.23% (1.53)	2.65% (1.25)
<i>Featured stock - positive</i>	1810	0.86%*** (12.79)	0.94%*** (10.45)	0.13% (0.41)	0.96%*** (4.70)	1.69%*** (4.84)
<i>Featured stock - negative</i>	393	-0.29%* (-1.78)	-0.54%* (-1.67)	-0.83% (0.80)	-2.97%*** (3.78)	-5.72%*** (3.29)
<i>Lightning/discussed - positive</i>	25444	0.15%*** (6.13)	0.10%** (2.11)	-0.91%*** (-4.36)	0.53%*** (3.95)	-0.26% (0.41)
<i>Lightning/discussed - negative</i>	9831	-0.16%*** (-3.85)	-0.23%*** (-3.61)	-0.25% (-1.21)	-0.87%*** (-5.14)	-1.59%*** (-4.78)

Panel B: CAR [1,w] after a Guest interview on Mad Money									
	All			EDGAR			Stocktwits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	CAR[1,1]	CAR[1,5]	CAR[1,20]	CAR[1,1]	CAR[1,5]	CAR[1,20]	CAR [1,1]	CAR[1,5]	CAR [1,20]
$SHOW_{\tau-1}$	0.0047*** (7.43)	0.0030*** (2.99)	0.0003 (0.18)	0.0039*** (4.62)	0.0027** (2.02)	0.0010 (0.4)	0.0025*** (3.89)	-0.0002 (-0.21)	0.0005 (0.23)
<i>Abnormal active attention<sub>t</sub></i>				0.0004** (2.05)	0.0009** (2.05)	0.0009 (0.99)	0.0001* (1.81)	0.0003 (1.52)	0.0004 (1.23)
<i>Abnormal active attention<sub>t</sub>* SHOW<sub>t-1</sub></i>				0.0014* (1.79)	-0.0002 (-0.13)	-0.0041 (-1.41)	0.0008*** (2.64)	0.0011** (2.16)	-0.0004 (-0.41)
$Market\ return_{\tau-1,\tau-29}$				0.0052 (0.82)	0.0067 (0.52)	-0.0336 (-1.26)	0.0037 (0.69)	0.0054 (0.84)	-0.0017 (-0.08)
$VIX$				0.0001 (0.7)	0.0001 (0.2)	-0.0001 (-0.08)	0.0001** (2.29)	0.0001** (2.13)	0.0002 (1.41)
$Size$				-0.0002*** (-2.22)	0.0001 (0.57)	0.0015*** (3.03)	-0.0002*** (-2.53)	0.0001** (2.13)	0.0010** (2.15)
$CAR_{\tau-10,\tau-1}$				0.0114** (2.56)	0.0312*** (3.3)	0.1288*** (5.84)	0.0085** (2.32)	0.030*** (3.83)	0.1407*** (7.49)
<i>Retail ownership</i>				0.0002 (-0.34)	-0.0019 (-0.96)	-0.0069* (-1.81)	-0.0002 (-0.28)	-0.0038** (-2.23)	-0.0079** (-2.04)
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	2220	2220	2220	1517	1517	1517	2005	2005	2005
<i>R-squared</i>	0.007	0.002	0.008	0.014	0.006	0.023	0.010	0.005	0.020

**Table 8: Active attention indexes differentiated by investor type and abnormal returns for stocks recommended/mentioned on the Mad Money Show**

This table reports the results for the dependent variable, *abnormal return* ( $AR$ ), for the next day after a firm is mentioned/recommended on Mad Money.  $AR$ s are computed using the Fama-French five-factor model. Beta coefficients estimated over a 200 trading-day estimation window  $[-230, -30]$  are used to calculate the expected returns over various event windows. *Abnormal return* ( $AR_{i,t}$ ) is the actual minus expected return for the day following the day (0) that the stock is mentioned/recommended on the Show. This is day that should reflect the first Show effect since the Show airs at 6:00 pm. For the  $SHOW_t$  variable, we use buy in column (1) and Buy and sell mentions/recommendations in columns (2) and (3) for Guest interviews; positive (F+) and negative (F-) mentions/recommendations of Featured stocks in columns (4) and (5); and positive (D&LR+) and negative (D&LR-) mentions/recommendations in the Discussed and Lightning rounds in columns (6) and (7). We calculate the abnormal active attention for institutional investors based on the number of queries on SEC EDGAR and the identity of IP owners, and for retail investors based on the number of posts on Stocktwits from 6:00 pm (Show start) to 9:00 am (Next-day market open). *InstDummy* (*RetailDummy*) is a dummy variable equal to 1 if the abnormal institutional (retail) active attention is higher than 94% of the firm's daily abnormal attention during the last 30 days. Control variables are the same as in Table 7. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	Interview (1)	Pos (2)	Neg (3)	F+ (4)	F- (5)	D&LR+ (6)	D&LR- (7)
$SHOW_{t-1}$	0.0034*** (4.38)	0.0031*** (7.26)	-0.0030*** (6.85)	0.0047*** (5.59)	-0.0054*** (-3.13)	0.0007** (2.01)	-0.0028*** (-6.16)
$InstDummy_t$	-0.0011 (-1.35)	-0.0005 (-0.33)	-0.0015* (-1.76)	-0.0011 (1.33)	-0.0013* (1.67)	-0.0016 (-1.28)	-0.0014 (-1.64)
$RetailDummy_t$	0.0014** (2.38)	-0.0005 (-0.43)	0.0037*** (5.36)	0.0021*** (3.20)	0.0027*** (4.41)	0.0044*** (4.53)	0.0038*** (5.37)
$InstDummy_t * SHOW_{t-1}$	-0.0055** (-1.84)	-0.0014 (-0.70)	0.0017 (0.85)	-0.0014 (-0.56)	-0.0005 (-0.01)	0.0003 (0.22)	0.0015 (0.71)
$RetailDummy_t * SHOW_{t-1}$	0.0037** (2.06)	0.0039*** (2.67)	-0.0049*** (3.12)	0.0046*** (2.07)	0.0050 (0.66)	0.0003*** (2.93)	-0.0051*** (3.13)
$InstDummy_t * RetailDummy_t * SHOW_{t-1}$	0.0081 (1.64)	0.0017 (0.75)	-0.0031 (-0.66)	-0.0041 (-0.54)	-0.0025 (-0.24)	0.0016 (0.56)	-0.0040 (-0.81)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of Obs.	13446	13446	13446	13446	13446	13446	13446
R-squared	0.013	0.12	0.012	0.015	0.012	0.012	0.015

## **Does the Mad Money Show cause investors to go madly attentive?**

### **Supplementary Appendix (SA)**

This supplementary appendix provides results that are referred to in the main text of this paper and will be later online when the paper is published.

#### **Section SA.1: Classifying IP queries on SEC EDGAR Log File**

##### **1) Identifying Non-robot IPs:**

We download the data from the SEC Edgar website<sup>24</sup> and follow the procedure used by Ryans (2017) to exclude robot or computer program downloads. Specifically:

1.1 We exclude crawler and non-successful queries (Code=200).

1.2 We exclude IPs with Downloads of 25 items in a single minute, or 3 different companies in a single minute, or more than 500 items in a single day.

Since IPs are not static, we perform step 2 every day and exclude IPs that met each of the three criteria. Ryan (2017) discusses that these criteria successfully identify automatic queries as humans need more time to process information or navigate through search pages. However, robots search and download files without a need to process the data. For more discussion regarding the procedure refer to Ryan (2017).

##### **2) We classify IP addresses into retail and institutional investors as follows:**

To make it harder to identify the Identity of IP users, IPs are partially anonymized by SEC EDGAR. For instance, available IP addresses are like: 206.212.89.hgb. Chen et al. (2020) de-anonymized the last 3 codes and provide a Cipher mapping that matches hidden octets on the SEC server to actual octets. By using this map, 206.212.89.hgb is converted to 206.212.89.240. We start with the non-robot IPs from stage one, and we convert all the partially anonymized IPs into full IPs by the mapping table in Chen et al. (2020).

While identifying individual users is not easy even with the full IP, we can identify institutions based on their ownership of a range of IP addresses. For example, IPs ranging from 206.212.64.0 to 206.212.127.255 belong to the CIT group according to the American registry of internet numbers ([www.Arin.net](http://www.Arin.net)). On the other hand, retail investors access the internet through internet service providers such as MCI Communications Services or Comcast Cable Communications. Thus, based on IPs and the owners of the IP ranges (financial institutions or internet providers), we can classify IPs into retail or institutional investors.

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<sup>24</sup> Link: <https://www.sec.gov/dera/data/edgar-log-file-data-set.html>

Next, we follow Drake et al. (2019) and select IP addresses (556,389 IPs) with at least 100 downloads through the whole database. We run a python code and detect the owners of each IP by looking into the www.ArIn.net database. Then, we classify financial institutions such as investment banks, hedge funds, or insurance companies as institutional investors. We exclude IPs owned by universities, audit firms, consulting firms, or non-financial corporations. We classify IPs belonging to the internet providers as retail investors. SA Table SA.1, Panels A and B, list the top 10 institutional investors and internet providers, respectively. We detect 111 institutional investors and 50 internet providers. They compromise 8.8% and 52.3% of all downloads from IPs with at least 100 downloads.<sup>25</sup> While we do not claim that our database is complete since investors can access financial information through other providers such as Bloomberg or FactSet, we argue that our abnormal active attention measure can reflect the current change in behaviors of users based on the Show in comparison to their behavior over the previous eight weeks.

## **Section SA.2: Heterogeneity in the Effect of the Show**

In this section, we analyze the effect of characteristics of a firm or the Show on the association between the Mad Money Show and the active attention of investors. First, we test the conjecture dealing with the effect of a firm's information environment on the relationship between the Show and the active attention of investors. We conjecture that the effects of the Show are stronger for the following four firm characteristics that make firms harder to value: smaller firms, with lower share turnover, higher retail ownership, and a lower number of analysts following the firm. We also hypothesize that the effect on the active attention of viewers is smaller for firms with prior recommendations on the Show during the last 7 or 30 days.

Our second group of conjectures is based on events that could change the overall attention of viewers of the Show. We posit that the impact of the Show on the active attention indexes is weaker on Fridays (start of the week-end), during the financial crisis, when the number of recommendations or interviews is higher, during the Olympics,<sup>26</sup> on days with extreme news pressure,<sup>27</sup> on Superbowl weekends,<sup>28</sup> and that

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<sup>25</sup> Among the identified 25,500 unique IP owners, we detect IPs with the highest volume of downloads. In particular, we detect 112 financial institutions and 50 internet providers. Our database of detected IPs compromise 60% of all downloads.

<sup>26</sup> We collect the dates for summer and winter Olympics from 2008 to 2018 from <https://www.loc.gov/rr/main/olympics/dates.html>

<sup>27</sup> We use the news pressure index of Eisensee and Strömberg (2007), which is defined as the median number of minutes devoted to the top 3 news items on US broadcast. Following Peress and Schmidt (2020), we define extreme news pressure as the days with the top 10% of news pressure annually.

<sup>28</sup> We collect the data from [https://en.wikipedia.org/wiki/List\\_of\\_Super\\_Bowl\\_champions](https://en.wikipedia.org/wiki/List_of_Super_Bowl_champions)



the impact of the Show is stronger when the stock market return is at an extreme.<sup>29</sup> To test these conjectures, we sort firms into quintiles for each firm characteristic and assign one to *DumVar* when the rank of a firm is the lowest (highest) quantile of the firm characteristic and equal to 0 otherwise. For the second group, we use a dummy variable for each of the other non-firm-related news events that could moderate the attention impact of the Show such as the financial crisis or the Superbowl.

We use the following regression to test each group of conjectures:

$$\begin{aligned} \text{Abnormal active attention}_{i,t} = & a + \beta_0 \text{SHOW}_t + \beta_1 \text{DumVar} + \beta_2 \text{DumVar} * \text{SHOW}_t + \\ & \gamma \text{Controls} + \text{fixed effects} + \epsilon_{i,t} \end{aligned} \quad (1)$$

Where all the terms are as previously defined in the main paper. Our primary interest is the interaction term between *DumVar* and *SHOW*.

In Panel A of SA Table SA.24, we use the abnormal active attention index to SEC EDGAR. We find that the effect of Guest interviews is significantly smaller for firms with lower turnover and bigger when the number of recommendations on the Show is higher. In Panel B, we use the abnormal active attention to Stocktwits. We find that the effect of an interview is significantly stronger for smaller firms, those with a lower number of analysts, and when the market return is at an extreme high. We also find that the impact of the Show is weaker on the active attention of investors for firms with low turnover or have had more interviews. In both panels, we observe that all the potential moderators have a significant (and expected) impact on investor active attention but that the Show's impact on investor active attention remains.














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<sup>29</sup> We use the value-weighted daily return of the applicable stock market index (NYSE/AMEX/NASDAQ/ARCA) from CRSP and sort the returns annually. We assign top (bottom) 1% as the extreme high (low) market returns.





















### Figure SA.1: Sample of recommendations on the Show

This figure provides examples of stock recommendations on the Show from thestreet.com, a website affiliated with Jim Cramer. Panel A lists the types of recommendations and segments of the Show. A sample of recommendations for the Show on April 24, 2017, is presented in Panel B. The data are extracted from <https://www.thestreet.com/jim-cramer/mad-money>.

#### Panel A: Types of recommendations and Show segments

Call Icons	Segment Icons
 Buy Recommendation	 Featured Stock
 Positive Mention	 Discussed Stock
 Hold or Neutral	 Caller's Stock
 Negative Mention	 Guest Interview
 Sell Recommendation	 Lightning Round!
	 Mail Bag
	 Game Plan
	 Sudden Death

#### Panel B: Sample of stock recommendations

EXCLUSIVE MAD MONEY STOCK SCREENER						
Cramer's Calls For: 04/24/2017						
Company	Date	Segment	Call	Price	Portfolio	
American Airlines (AAL)	04/24			\$46.44	<a href="#">add</a>	
Abbott Laboratories (ABT)	04/24			\$44.13	<a href="#">add</a>	
Alaska Air Group (ALK)	04/24			\$90.68	<a href="#">add</a>	
Berkshire Hathaway (BRK.B)	04/24			\$165.78	<a href="#">add</a>	
Cara Therapeutics (CARA)	04/24			\$16.61	<a href="#">add</a>	
Chesapeake Energy (CHK)	04/24			\$5.38	<a href="#">add</a>	
CSX (CSX)	04/24			\$50.13	<a href="#">add</a>	
Delta Air Lines (DAL)	04/24			\$46.81	<a href="#">add</a>	
Hasbro (HAS)	04/24			\$101.70	<a href="#">add</a>	
Honeywell (HON)	04/24			\$129.79	<a href="#">add</a>	

## Figure SA.2: A transcript of the Mad Money Show

The following is part of a transcript of the Mad Money Show on May 18, 2021, as an example. The transcripts are available on Thestreet.com, which is affiliated with Jim Cramer. The link to the following transcript is available at <https://www.thestreet.com/jim-cramer/cramers-mad-money-recap-may-18-2021>. Panel A shows Cramer's response to viewers' questions in the Lightning round and Panel B shows the transcripts of a Guest interview on the Mad Money Show.

**Panel A:** Extract from a transcript of a Lightning Round on the Mad Money Show

### Lightning Round

Here's what Jim Cramer had to say about some of the stocks that callers offered up during the "Mad Money Lightning Round" Tuesday evening:

Harvard Bioscience ([HBIO](#)) - [Get Report](#): "They had a good quarter. That's a decent speculative stock."

Oneok ([OKE](#)) - [Get Report](#): "I happen to like Oneok. I think you have a good one there."

Riot Blockchain ([RIOT](#)) - [Get Report](#): "If you think Bitcoin is going up, you can buy this one. "

ViacomCBS ([VIACA](#)) - [Get Report](#): "People think a deal has to happen with these guys or they're going to struggle."

Montrose Environmental ([MEG](#)) : "This is a little speculative name but I like the business."

Turtle Beach ([HEAR](#)) - [Get Report](#): "Everyone loves these guys, but I like Logitech International ([LOGI](#)) - [Get Report](#)."

## Executive Decision: Signet Jewelers

For his second "Executive Decision" segment, Cramer also spoke with Gina Drosos, CEO of Signet Jewelers ([SIG](#)) - [Get Report](#), the jewelry retailer with shares that fell 4.4% Tuesday.

Drosos said that Signet was behind the curve when it came to online sales going into the pandemic. The company only had 5% of sales coming from online, while the industry had 15%. But through a lot of hard work, Signet now boasts over 20% online sales.

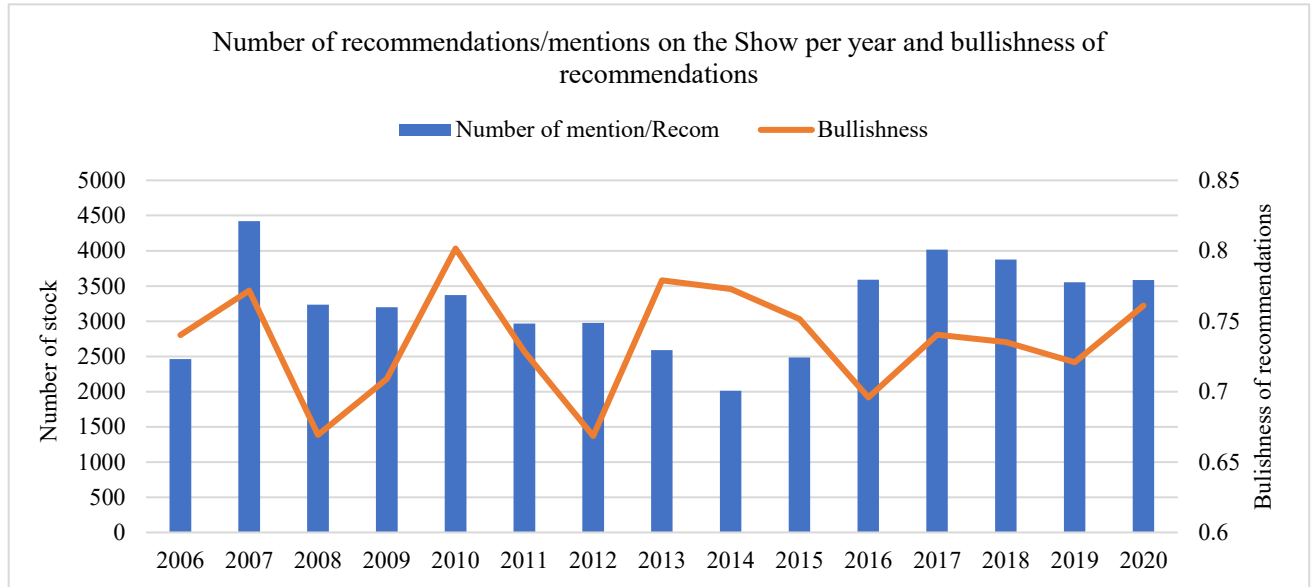
Drosos added that Signet has also significantly revamped their culture. They now operate with a purpose, making data-driven decisions and foster an environment of being agile and innovative. This has allowed Signet to respond to their customers in ways their competitors can't.

Signet is also a leader in the circular economy, making big commitments to recycling and sustainability. That was the reason behind their recent acquisition of Rocksbox, she added.

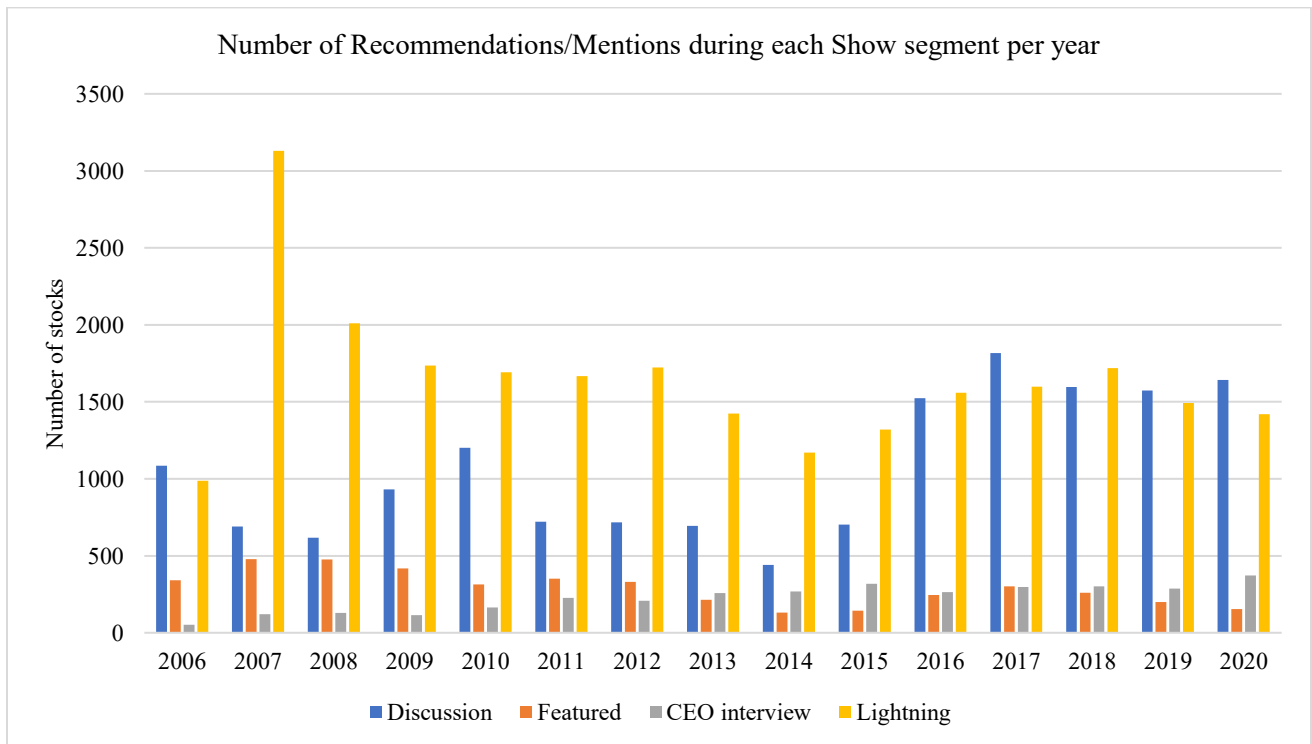
Cramer called Tuesday's weakness in Signet a gift to investors.

**Figure SA.3: Statistics of recommendations/mentions on the Show**

**Panel A:** Total number of recommendations/mentions on the Show annually and bullishness (Number of buy recommendations/mentions to All recommendations) on the Show

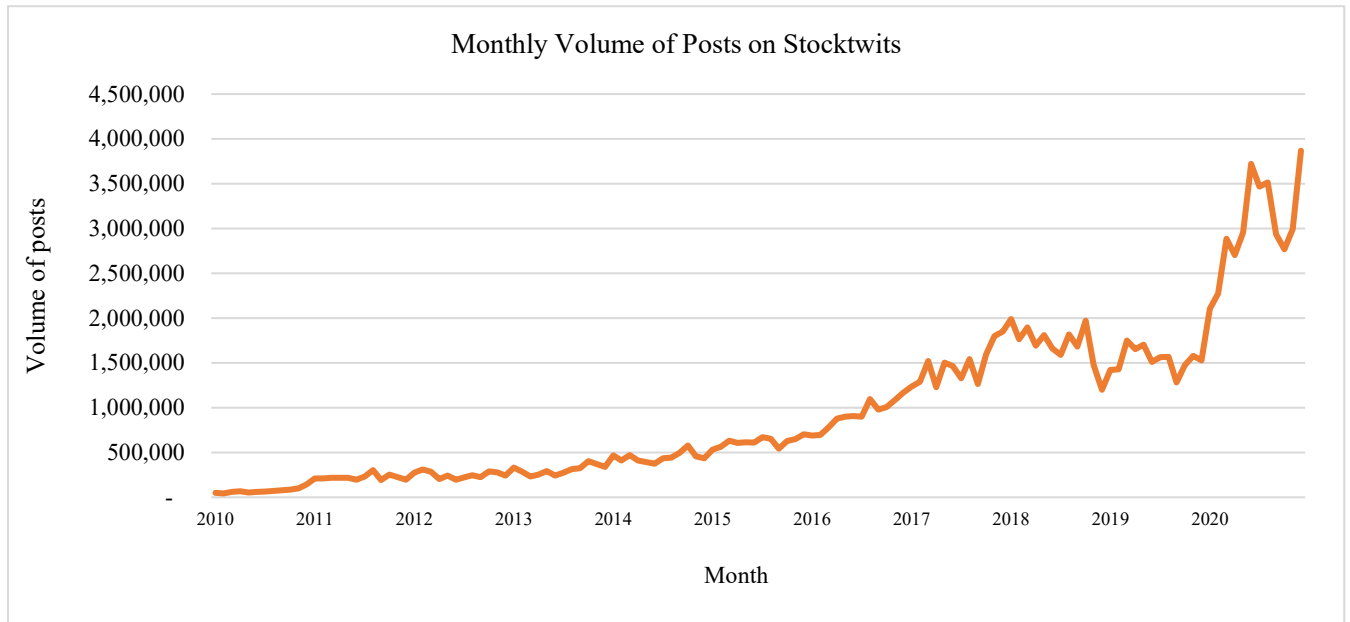


**Panel B:** Number of recommendations/mentions during each segment of the Show annually



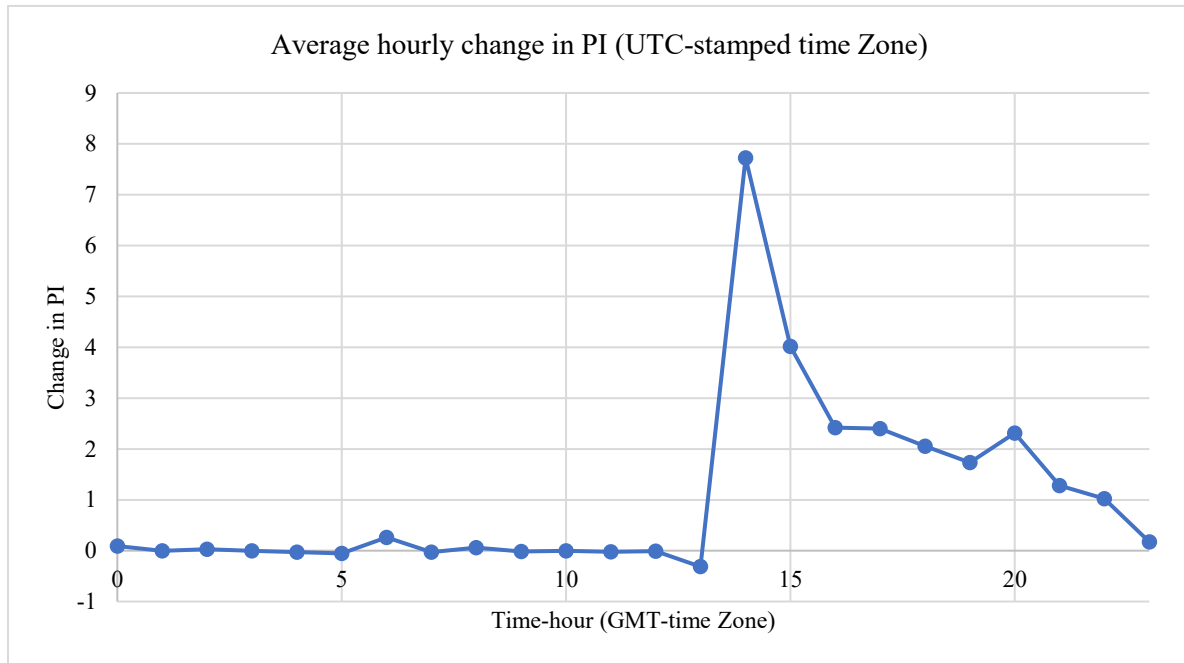
**Figure SA.4: Monthly volume of posts on Stocktwits**

This figure depicts the monthly volumes of all posts on Stocktwits with any cashtag from 2010 to 2020. Cashtag is a stock ticker symbol (e.g., \$TSLA) that users can use to link their posts to the firm.



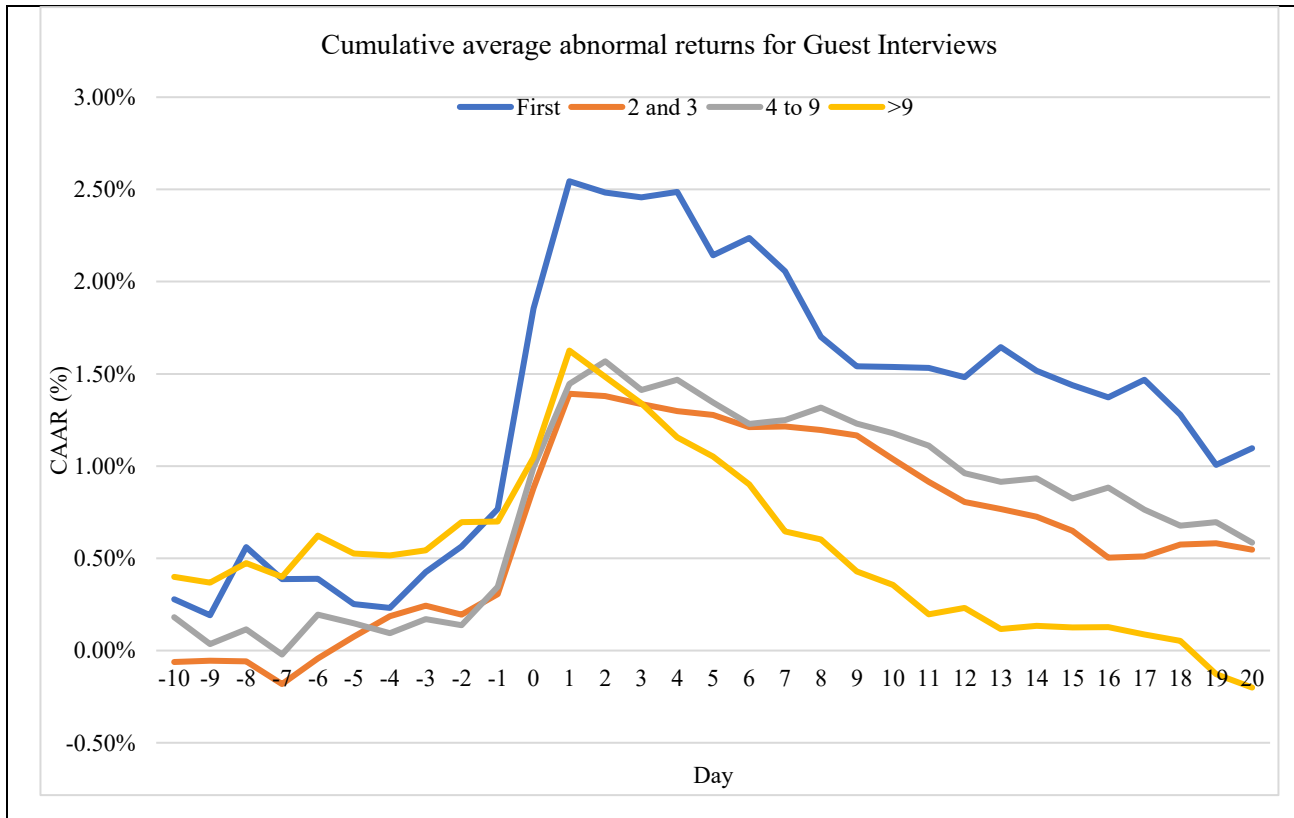
**Figure SA.5: Average hourly change in popularity index (PI) for Robinhood users**

This figure shows the average hourly change in the PI for Robinhood users among all stocks available in our database. Robintrack reports the UTC-stamped data hourly. US stock market closes at 4:30 pm, which is either 22:30 or 23:30 UTC. According to Barber et al. (2021), Robintrack reported each data at approximately 45 minutes after the hour, and based on their analysis, “the likely lag is between 30 and 45 minutes”. For our main analysis, we extract the Close-PI for the last UTC-stamped data point on each day (22:30 or 23:30 UTC).



**Figure SA.6: Cumulative average abnormal returns (CAARs) of recommended/mentioned stocks on the Mad Money Show**

The figure depicts the cumulative average abnormal returns or CAAR around the Mad Money Show. The abnormal return or AR is computed using the Fama-French five-factor model for each mentioned firm in sample  $s$  over the event window  $[-10, 20]$ . The beta coefficients, which are estimated over a 200 trading-day estimation window  $[-230, -30]$ , are used in calculating the expected returns for every relative day  $\tau$  in the window  $[-10, 20]$ . Abnormal return or  $AR_{i,\tau}$  is the difference between expected and actual returns for firm  $i$  in sample  $s$  for relative time  $\tau$ . The CAARs for the firms in sample  $s$  over various relative time windows from the base period are computed as:  $CAAR_s[T_1, T_2] = \sum_{\tau=T_1}^{T_2} AAR_{s,\tau}$ , where  $AAR_{s,\tau}$  is the average abnormal return of the firms in sample  $s$  for relative time  $\tau$ . In the graph,  $T_1 = -10$  and  $T_2$  takes on values from -10 to +20. Day 0 is the date the stock is mentioned or recommended on the Show. Since the Show airs at 6:00 pm, the first effect of the Show is on day 1. The CAAR around Guest interviews (Interview) and buy (F+) and sell (F-) recommendations in the Featured stocks segment are depicted in this figure. Since the Show starts on March 2005 and our database starts on June 2006, we exclude the interviews from 2006 through 2007.





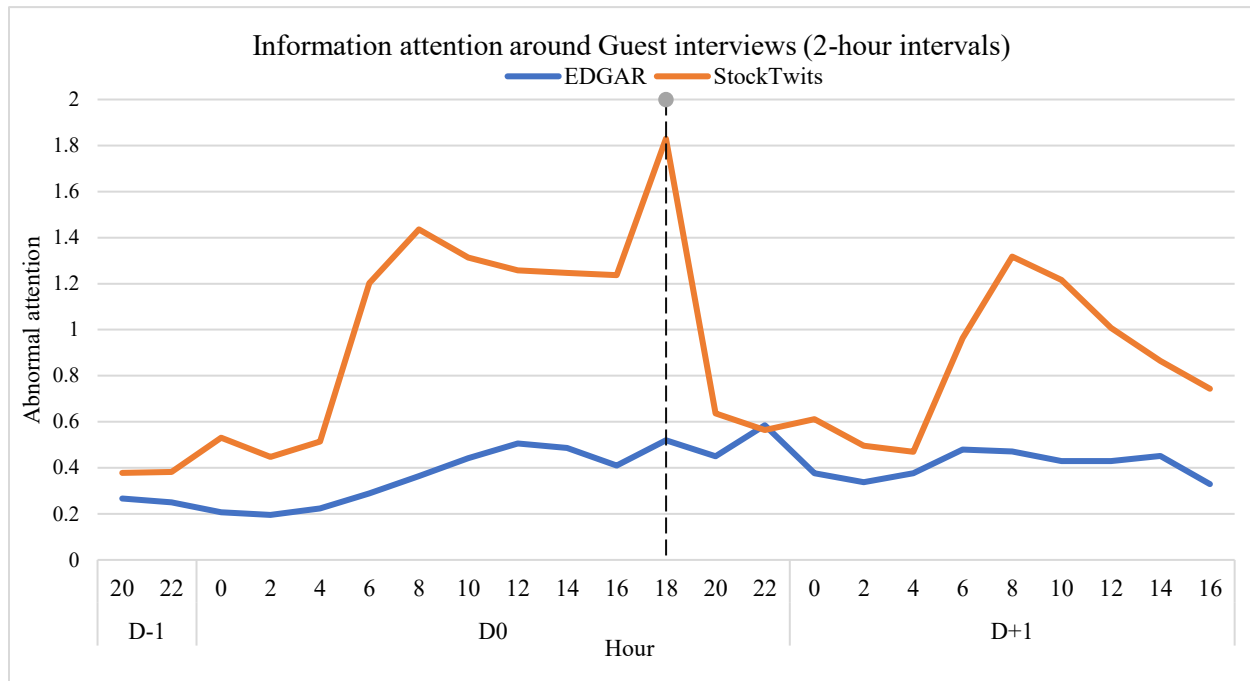
**Figure SA.7: Examples of some Pre-Show announcements of an upcoming Guest interview on the Show later in the day**

Examples of announcements during market hours, which were created by the official account of the Show, of Guests to be interviewed later on the Show.



**Figure SA.8: Average abnormal investor active attention to SEC EDGAR and Stocktwits for stocks mentioned on the Show**

Abnormal investor active attention is calculated by the logarithm of the ratio of the number of queries (tweets) on SEC EDGAR (Stocktwits) regarding a firm mentioned on the Show over the median number of queries (tweets) on SEC EDGAR (Stocktwits) for that stock on the same weekday and interval during the past eight weeks. Day 0 is the day the stock is mentioned on the Show.



**Table SA.1: Stocks with the highest mentions on the Show**

This table reports the list of top-20 stocks based on the frequency of mentions or recommendations on the Show.

Ticker	Company	# of recommendations	Ratio to all recommendations
AAPL	Apple Inc	696	1.44%
CAT	Caterpillar Inc	314	0.65
BA	Boeing Co	290	0.6
VZ	Verizon Communications Inc	282	0.58
CSCO	Cisco Systems Inc	268	0.55
HD	Home Depot Inc	267	0.55
NFLX	Netflix Inc	265	0.55
SBUX	Starbucks Corp	238	0.49
CRM	Salesforce.com Inc	237	0.49
FB	Facebook Inc.	234	0.48
BAC	Bank of America Corp	229	0.47
T	AT&T Inc	222	0.46
INTC	Intel Corp	219	0.45
CELG	Celgene Corporation	218	0.45
NVDA	NVIDIA Corporation	218	0.45
JPM	JPMorgan Chase & Co	213	0.44
DIS	Walt Disney Co	210	0.43
WMT	Walmart Inc	210	0.43
AMZN	Amazon.com, Inc	208	0.43
C	Citigroup Inc	208	0.43

**Table SA.2: The level of activities on Stocktwits and SEC EDGAR**

The number of posts on Stocktwits and queries on SEC EDGAR conditioned on the occurrence of earnings announcements (EAs). N is the number of observations.

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Minimum</b>	<b>Maximum</b>
Number of posts on Stocktwits: Non-earnings announcements	11,932,839	5.154	68.248	0	25067
Number of posts on StockTwits: Earnings announcements	91,446	48.089	257.839	0	15215
Number of queries on EDGAR: Non-earnings announcements	12,886,804	30.125	114.658	0	79277
Number of queries on EDGAR: Earnings announcements	9,4376	76.614	406.777	0	79156

**Table SA.3: History of relevant Robinhood outages**

We extract Robinhood outage incidents from <https://status.robinhood.com/history>. The following are the ones that affected retail trading and lasted for at least one hour.

Start	End	Detail
2019-11-06 9:43 EST	2019-11-06 12:54 EST	Equities, options, and cryptocurrencies issue
2020-03-02 9:38 EST	2020-03-03 02:13 EST	System-wide outage
2020-03-03 10:04 EST	2020-03-03 11:55 EST	System-wide outage
2020-06-18 11:39 EST	2020-06-18 13:08 EST	Trading issue

**Table SA.4: Top detected accessing institutional investors and internet providers**

This table reports the top detected accessing institutional investors and internet providers. We detect unique IPs which sent queries to access financial information on SEC EDGAR using the procedure detailed in Section SA1. We classify the IP owners based on their identity into institutional investors and internet providers. In Panels A and B, we provide the top entities in each category and the number of all downloads associated with the entity.

**Panel A: Institutional investors**

Description	Download count
JPMorgan Chase & Co.	4,219,218
Wells Fargo & Company	3,723,620
Bank of America, National Association	2,263,694
Citicorp Global Information Network	2,115,219
Citigroup	2,109,554
Deutsche Bank AG	1,769,117
UBS AG	1,478,778
Morgan Stanley	1,005,856
Raymond James Financial, Inc.	741,827
S&P Global Inc.	739,060

**Panel B: Internet providers (our proxy for retail investors)**

Description	Download count
MCI Communications Services, Verizon Business	34,916,294
PSINet, Inc.	25,354,988
Comcast Cable Communications, LLC	20,465,696
AT&T Services, Inc.	19,542,564
Charter Communications Inc	12,418,079
CenturyLink Communications, LLC	11,419,391
Level 3 Parent, LLC	10,124,939
AT&T Corp.	9,901,453
TW telecom holdings, inc.	9,544,646
Windstream Communications LLC	7,538,987

**Table SA.5: Correlations among the variables**

This table presents the correlations between the variables. All variables are defined in the Appendix.

	<b>Pearson Correlation Coefficients</b>									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) <i>Abnormal attention EDGAR</i>	1									
(2) <i>VIX</i>	0.006	1								
(3) <i>Sentiment</i>	-0.005	-0.399	1							
(4) <i>Market Return<sub>t-29,t-1</sub></i>	-0.040	-0.466	-0.035	1						
(5) <i>Analyst</i>	0.001	-0.058	-0.006	0.021	1					
(6) <i>Retail ownership</i>	-0.001	0.022	0.001	-0.002	-0.298	1				
(7) <i>Return<sub>t-1</sub></i>	-0.011	-0.079	-0.003	0.117	0.004	-0.007	1			
(8) <i>Ln(Market Cap<sub>t-1</sub>)</i>	0.011	-0.120	0.067	0.031	0.639	-0.245	0.023	1		
(9) <i>Ln(Turnover<sub>t-29,t-1</sub>)</i>	0.012	0.033	-0.027	-0.010	0.016	0.064	-0.007	-0.068	1	
(10) <i>Return<sub>t-29,t-1</sub></i>	-0.022	-0.215	-0.015	0.451	0.026	-0.031	0.199	0.097	-0.030	1

**Table SA.6: The effect on abnormal active attention of a stock being mentioned on the Show**

This table reports the effects on investor active attention from a firm being mentioned on the show, Mad Money. The dependent variable is Daily abnormal investor active attention ( $DAIAA_{i,t}$ ). Abnormal active attention is calculated as the logarithm of the ratio of the number of queries on SEC EDGAR (posts on Stocktwits) regarding a firm from 6:00 pm (Show start time) to the start of the next day's Show at 6:00 pm over the median of the number of queries for the same window during the last 8 weeks for the same firm.  $SHOW_t$  is a dummy variable equal to 1 if the Show mentions stock  $i$  on day  $t$  and 0 otherwise. The  $SHOW_t$  dummy variable is based on Guest interviews representing stock  $i$  on day  $t$  in Panel A. All non-robot queries on EDGAR are counted in columns (1) to (3), only institutional IPs in column (4) and only retail IPs in column (5) to calculate  $DAIAA_{i,t}$ . In Panels B and C,  $SHOW_t$  is all recommendations/mentions on the Show in column (1), buy and sell mentions/recommendations in columns (2) and (3), positive (F+) and negative (F-) mentions/recommendations of Featured stocks in columns (4) and (5), and positive (D&LR+) and negative (D&LR-) mentions/recommendations in the Discussed and Lightning rounds in columns (6) and (7).  $VIX_{t-1}$  is the lagged Chicago board options exchange volatility index. *Market return* is the holding-period return of the Stock Market Indexes (NYSE/AMEX/NASDAQ/ARCA) over the past month. *Analyst* is the number of analysts following the firm plus one. *EA* is a dummy variable equal to 1 for earnings announcement days and 0 otherwise. *Retail ownership* is the percentage of shares outstanding held by retail investors determined by one minus the percentage of institutional ownership.  $Return_{t-1}$  is the stock return over the last day.  $Market\ Cap_{t-1}$  is the logarithm of a firm's market capitalization.  $Turnover_{t-1,t-29}$  is the trading volume over the last four weeks divided by shares outstanding.  $Return_{t-1,t-29}$  is the stock holding period return over the last four weeks. Results for the control variables are suppressed in Panels B & C due to their similarity to those reported in Panel A. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: Abnormal investor active attention to Guest interviews</b>								
	EDGAR (N=11,865,791)					Stocktwits (N=12,024,285)		
	(1)	(2)	(3)	Inst (4)	Retail (5)	(6)	(7)	(8)
$SHOW_{t-1}$	0.394** (17.04)	0.304** (14.97)	0.236*** (11.03)	0.276*** (5.85)	0.312*** (11.15)	1.272** (25.98)	1.017*** (25.42)	0.991*** (22.09)
Abnormal active attention <sub>t-1</sub>		0.273** (121.11)	0.327*** (102.94)	0.148*** (96.23)	0.224*** (115.94)		0.210*** (117.90)	0.206*** (111.87)
$VIX_{t-1}$			-0.001*** (-10.23)	-0.001 (-1.51)	-0.001 (-3.02)			-0.005*** (-23.78)
$Market\ return_{t-29,t-1}$			1.021*** (-60.78)	-0.611*** (-19.63)	-1.191*** (-49.28)			0.398*** (9.91)
<i>Analyst</i>			-0.013*** (-9.75)	-0.068*** (-14.04)	-0.022*** (-9.29)			-0.081*** (-16.57)
<i>EA</i>			0.517*** (66.98)	0.633*** (45.24)	0.676*** (67.08)			2.450*** (146.5)
<i>Retail ownership</i>			0.021*** (5.14)	0.013 (1.17)	0.050*** (8.09)			0.029*** (2.58)
$Return_{t-1}$			1.288*** (8.48)	1.671*** (6.96)	1.638*** (8.05)			0.577*** (8.88)
$Ln(Market\ Cap_{t-1})$			0.012*** (20.1)	-0.041*** (-20.18)	0.014*** (13.69)			-0.002 (-1.47)
			0.035***	0.020***	0.041***			0.089***



$Ln(Turnover_{t-1,t-29})$			(17.56)	(5.2)	(13.61)			(25.54)
$Return_{t-1,t-29}$			-0.015***	0.029***	-0.031***			0.086***
			(-2.65)	(3.17)	(-3.78)			(4.71)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year Fes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.005	0.079	0.113	0.041	0.066	0.005	0.049	0.090

**Panel B: Abnormal investor active attention to EDGAR based on Show segment (N = 12,979,842)**

	Any	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)	(6)
$SHOW_{t-1}$	0.079***	0.083***	0.059***	0.220***	0.204***	0.048***	0.051***
	(16.00)	(14.38)	(5.99)	(11.61)	(6.62)	(4.85)	(4.58)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.112	0.112	0.112	0.112	0.112	0.112	0.112

**Panel C: Abnormal investor active attention to Stocktwits based on the Show segment (N = 12,024,285)**

	Any	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)	(6)
$SHOW_{t-1}$	0.322***	0.347***	0.234***	0.675***	0.636***	0.224***	0.212***
	(27.91)	(25.99)	(11.84)	(16.08)	(8.79)	(19.36)	(10.51)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.090	0.090	0.090	0.090	0.090	0.090	0.090

**Table SA.7: The effect on abnormal active attention of institutional versus retail investors of stocks mentioned on the Show**

This table reports the results for investor active attention from a firm being mentioned on the show, Mad Money. The dependent variable is Daily abnormal investor active attention ( $DAIAA_{i,t}$ ), which is the abnormal active attention based on accesses of files available on SEC EDGAR related to firm  $i$  on day  $t$ . The window to measure  $DAIAA_{i,t}$  is from 6:00 pm (the start time of the Show) to the start of the next day's Show at 6:00 pm. Abnormal attention is calculated as the logarithm of the ratio of the number of queries on SEC EDGAR regarding a firm over the median number of queries on the same window during the last 8 weeks for the same firm. Institutional and retail attention indexes are based on the identity of IP owners of queries on SEC EDGAR.  $SHOW_t$  is a dummy variable equal to 1 if the Show mentions stock  $i$  on day  $t$  and is equal to 0 otherwise. In Panel A,  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. We consider only institutional IPs in columns (1) to (3) and only retail IPS in columns (4) to (6) to calculate  $DAIAA_{i,t}$ . In Panels B and C,  $SHOW_t$  is all recommendations/mentions on the Show in column (1), buy and sell mentions/recommendations in columns (2) and (3), positive and negative mentions/recommendations of Featured stocks in columns (4) and (5), and positive and negative mentions/recommendations in the Discussed and Lightning rounds in columns (6) and (7).  $VIX_{t-1}$  is the lagged Chicago board options exchange volatility index. S&P return is the holding-period return of the S&P500 over the past month. Analyst is the number of analysts following the firm plus one. EA is a dummy variable equal to 1 if the day is the day of the earnings announcement by the firm and 0 otherwise. Retail ownership is the percentage of shares outstanding held by retail investors determined by one minus the percentage of institutional ownership.  $Return_{t-1}$  is the stock return over the previous day.  $Market\ Cap_{t-1}$  is the logarithm of a firm's market capitalization.  $Turnover_{t-1,t-29}$  is the trading volume over the last four weeks divided by shares outstanding.  $Return_{t-1,t-29}$  is the stock holding period return over the last four weeks. Results for the control variables are suppressed in Panels B & C due to their similarity to those reported in Panel A. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level respectively

**Panel A:** Abnormal investor attention to SEC EDGAR after a Guest interview (N=11,867,385)

	Institutional investors			Retail investors		
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Guest interview</i>	0.303*** (6.62)	0.243*** (5.71)	0.276*** (5.85)	0.431*** (15.16)	0.342*** (13.39)	0.312*** (11.15)
<i>Abnormal active attention<sub>t-1</sub></i>		0.162*** (102.44)	0.148*** (96.23)		0.215*** (144.94)	0.224*** (115.94)
<i>VIX<sub>t-1</sub></i>			-0.001 (-1.51)			-0.001*** (-3.02)
<i>Market return<sub>t-1,y-29</sub></i>			-0.611*** (-19.63)			-1.192*** (-49.28)
<i>Analyst</i>			-0.068* (-14.04)			-0.022*** (-9.29)
<i>Earnings announcement</i>			0.633*** (45.24)			0.676*** (67.08)
<i>Retail ownership</i>			-0.014 (1.17)			0.050*** (8.09)
<i>Return<sub>t-1</sub></i>			-1.671*** (6.96)			1.638*** (8.05)
<i>ln(Market Cap<sub>t-1</sub>)</i>			-0.041*** (-20.18)			0.014*** (13.68)
<i>Ln (Turnover<sub>t-1,t-29</sub>)</i>			0.021*** (3.17)			0.041*** (13.61)
<i>Return<sub>t-1,t-29</sub></i>			0.029*** (3.17)			-0.031*** (-3.78)
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.008	0.034	0.041	0.005	0.051	0.066

**Panel B:** Abnormal active attention of *institutional investors* to Edgar based on the segment of the Show (N =11,867,385)

	Any	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>SHOW</i>	0.098***	0.097***	0.099***	0.185***	0.304***	0.065***	0.086***
	(8.48)	(7.13)	(4.81)	(5.38)	(3.13)	(4.4)	(4.01)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.041	0.041	0.041	0.041	0.041	0.041	0.041

**Panel C:** Abnormal active attention of *retail investors* to Edgar based on the segment of the Show (N = 11,867,385)

	Any	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>SHOW</i>	0.096***	0.105***	0.059***	0.217***	0.256***	0.066***	0.047***
	(12.52)	(12.27)	(3.89)	(8.93)	(5.33)	(6.48)	(2.99)
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.090	0.090	0.090	0.090	0.090	0.090	0.090

**Table SA.8: Short-term effect on abnormal active attention of a Guest interview for the stock on the Show**

This table reports the short-term results for investor active attention from a Guest interview on the show, Mad Money. The dependent variable is the 2-hour abnormal investor active attention ( $2HAIAA_{i,t}$ ), which is the abnormal active attention based on accesses of files available on SEC EDGAR or the number of posts on Stocktwits related to firm  $i$  on day  $t$ . The 2-hours window to measure  $DAIAA_{i,t}$  is from 6:00 pm (the start time of the Show) to 8:00 pm. Abnormal attention is calculated as the logarithm of the ratio of the number of queries on SEC EDGAR (posts on Stocktwits) regarding a firm over the median of the number of queries on the same window during the last 8 weeks for the same firm. Institutional and retail attention indexes are based on the identity of IP owners of queries on SEC EDGAR.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. We consider all non-robot queries on EDGAR in column (1), only institutional IPs in column (2), only retail IPs in column (3), and Posts on Stocktwits in column (4) to calculate  $2HAIAA_{i,t}$ . Control variable definitions are provided in the Appendix to the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	EDGAR			
	Total (1)	Retail (2)	Institutional (3)	Stocktwits (4)
$SHOW_{t-1}$	0.390*** (9.8)	0.380*** (8.74)	0.163*** (4.15)	1.471*** (22.8)
$Abnormal\ active\ attention_t$	0.300*** (66.94)	0.226*** (59.98)	0.060*** (42.29)	0.062*** (54.28)
$VIX_{t-1}$	-0.0001 (-0.76)	0.001*** (11.02)	0.0005*** (6.19)	-0.002*** (-12.96)
$Market\ return_{t-1,y-29}$	-0.642*** (-21.05)	-0.297*** (-10)	0.017 (1.2)	-0.016 (-0.58)
$Analyst$	0.039*** (-8.51)	-0.045*** (-9.21)	0.019*** (6.06)	-0.007 (-1.55)
$EA$	0.124*** (18.07)	0.104*** (14.2)	-0.023*** (-5.28)	0.257*** (25.8)
$Retail\ ownership$	0.062*** (5.93)	0.046*** (4.1)	-0.080*** (8.62)	0.006 (0.63)
$Return_{t-1}$	2.076*** (10.28)	2.050*** (8.76)	1.192*** (6.79)	0.323*** (9.06)
$\ln(Market\ Cap_{t-1})$	-0.012*** (-6.48)	-0.023*** (-12.26)	0.024*** (17.54)	0.017*** (8.84)
$\ln(Turnover_{t-1,t-29})$	-0.002 (-0.66)	0.006 (1.64)	0.021*** (7.65)	0.098*** (34.19)
$Return_{t-1,t-29}$	-0.019** (-2.25)	-0.033*** (3.5)	-0.002 (-0.49)	0.063*** (4.49)
$Firm\ FE$	Yes	Yes	Yes	Yes
$Weekday, Month, Year\ FE$	Yes	Yes	Yes	Yes
$\# of\ observations$	4,366,112	4,366,112	4,366,112	4,577,653
$R-squared$	0.048	0.042	0.078	0.060

**Table SA.9: The effect on abnormal active attention with the exclusion of the EA windows**

This table reports the results for investor active attention from a Guest interview for a firm on the show, Mad Money. The dependent variable is Daily abnormal investor active attention ( $DAIAA_{i,t}$ ), which is the abnormal active attention based on access to the files available on SEC EDGAR or the number of posts on Stocktwits related to a firm  $i$  on day  $t$ . The window to measure  $DAIAA_{i,t}$  is from 6:00 pm (the Show's start time) to the start of the next day's Show at 6:00 pm. Abnormal investor active attention is calculated as the logarithm of the ratio of the number of queries on SEC EDGAR (posts on Stocktwits) regarding a firm over the median number of queries on the same window during the last 8 weeks for the same firm.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. We consider all non-robot queries on EDGAR in columns (1) to (3), only institutional IPs in column (4), and only retail IPs in column (5) to calculate  $DAIAA_{i,t}$ . We exclude days with earnings announcements (EAs) in the window from -7 to +3. Control variable definitions are provided in the Appendix to the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* denote significance at the 1%, 5% and 10% level, respectively.

	EDGAR					Stocktwits		
	(1)	(2)	(3)	Inst (4)	Retail (5)	(6)	(7)	(8)
$Show_{t-1}$	0.283*** (12.1)	0.235*** (11.19)	0.174*** (8.82)	0.098* (1.87)	0.214*** (7.15)	1.012*** (21.56)	0.899*** (20.69)	0.881*** (19.43)
$Abnormal\ active\ attention_t$		0.265*** (115.95)	0.316*** (98.52)	0.143*** (88.29)	0.215*** (108.36)		0.176*** (92.22)	0.172*** (93.3)
$VIX_{t-1}$			-0.001*** (-9.08)	-0.001 (-0.94)	-0.001 (-1.97)			-0.005*** (-20.4)
$Market\ return_{t-1,y-29}$			-1.106*** (-62.03)	-0.703*** (-21.46)	-1.295*** (-51.8)			0.286*** (6.51)
$Analyst$			-0.010*** (-7.78)	-0.068*** (-14.05)	-0.017*** (-7.64)			-0.078*** (-16.68)
$Retail\ ownership$			0.029*** (7.35)	0.030** (2.51)	0.065*** (10.92)			0.060*** (5.66)
$Return_{t-1}$			1.217*** (7.8)	1.366*** (6.06)	1.508*** (7.44)			0.629*** (7.83)
$Ln\ (Market\ Cap_{t-1})$			0.013*** (24.34)	-0.043*** (-20.81)	0.015*** (15.64)			-0.004** (-2.33)
$Ln\ (Turnover_{t-1,t-29})$			0.027*** (14.3)	0.005 (1.35)	0.030*** (10.61)			0.064*** (20.18)
$Return_{t-1,t-29}$			-0.013*** (-2.25)	0.033*** (3.27)	-0.027*** (-3.26)			0.100*** (4.68)
$Firm\ FE$	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$Weekday, Month, Year\ FE$	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$\#\ of\ observations$	10,915,314	10,915,314	3,870,366	3,870,366	3,870,366	11,000,629	10,997,776	4,067,845
$R-squared$	0.007	0.079	0.105	0.035	0.063	0.004	0.035	0.044

**Table SA.10: The impact on Turnover**

This table reports the impact on turnover from a firm being mentioned on the show, Mad Money. The dependent variable is *Turnover*, which is the ratio of trading volume scaled by shares outstanding. In Panels A,  $SHOW_t$  is a dummy variable equal to 1 for a Guest interview representing stock  $i$  on day  $t$  and 0 otherwise and *Abnormal active attention* in columns (3) and (5) is pre-market investor active attention (PMIAA) to EDGAR from 6:00 pm (start of the Show) to 9:00 am (next day's Market open). The *Abnormal attention* in columns (4) and (6) are pre-market investor active attention (PMIAA) to Stocktwits during the 2-hour window from 6:00 pm to 8:00 pm (i.e. from the beginning of the Show). The data in columns (1) and (2) are from 2006 to 2020. Due to the availability of data from EDGAR (2003 to Q2-2017) and Stocktwits (2010-2021), we focus on 2010 to Q2-2017 (the overlap) in columns (3) to (6). In Panel B, we use all recommendations on the Show in column (1), buy and sell mentions/recommendations in columns (2) and (3), and positive (F+) and negative (F-) mentions/recommendations of Featured stocks in columns (4) and (5), and positive (D&LR+) and negative (D&LR-) mentions/recommendations in the Discussed and Lightning rounds in columns (6) and (7). Control variable definitions are provided in the Appendix. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: The effect of Guest interviews on Turnover</b>						
	(1)	(2)	EDGAR (3)	EDGAR-2H (4)	Stocktwits (5)	Stocktwits-2H (6)
$SHOW_{t-1}$	0.009*** (13.23)	0.007*** (10.9)	0.006*** (7.71)	0.007*** (8.3)	0.004*** (6.2)	0.004*** (5.92)
<i>Abnormal active attention<sub>t</sub></i>			0.0006*** (37.26)	0.0001*** (17.92)	0.0007*** (38.89)	0.0015*** (32.91)
<i>Abnormal active attention<sub>t</sub> * Size</i>			0.0016* (1.88)	0.0009** (2.41)	0.0013*** (4)	0.0010*** (2.91)
<i>Size</i>		-0.001*** (-17.62)	-0.001*** (-14.08)	-0.001*** (-14)	-0.0015*** (-14.08)	-0.0016*** (-14.32)
$Return_{t-1,t-29}$		-0.0006** (-2.3)	-0.0002 (-0.56)	-0.0003 (-0.64)	-0.0006 (-1.4)	-0.0006 (-1.49)
<i>Analyst</i>		0.004*** (16.34)	0.004*** (14.06)	0.001*** (14.08)	0.004*** (14.1)	0.004*** (13.91)
$EA_t$		0.009*** (41.91)	0.009*** (34.67)	0.009*** (34.94)	0.008*** (30.92)	0.009*** (34.35)
$EA_{t-1,t-7}$		0.005*** (49.97)	0.005*** (41.12)	0.005*** (42.07)	0.005*** (39.75)	0.005*** (41.13)
<i>Retail ownership</i>		-0.002*** (-3)	-0.0003 (-0.5)	-0.0004 (-0.53)	-0.0004 (-0.57)	-0.0004 (-0.57)
$Return_{t-1}$		0.0004 (1.43)	0.0005 (1.1)	-0.0005 (-1.16)	-0.0013*** (-2.88)	-0.0009** (-2.08)
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i># of obs.</i>	7,345,749	5,641,930	4,622,449	4,622,449	4,622,449	4,622,449
<i>R-squared</i>	0.462	0.517	0.507	0.506	0.510	0.512

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**Panel B: The effect of different segments on subsequent Turnover (N = 11,529,777)**

	Anysection	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>SHOW<sub>t-1</sub></i>	0.006*** (15.64)	0.005*** (11.98)	0.009*** (21.19)	0.008*** (11.61)	0.012*** (11.2)	0.004*** (10.28)	0.009*** (21.07)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.518	0.518	0.518	0.518	0.518	0.518	0.518

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**Table SA.11: Effect of institutional and retail abnormal active attention to EDGAR on Turnover**

This table reports the results for turnover from a firm being mentioned on the show, Mad Money. The dependent variable is *Turnover*, which is the ratio of trading volume scaled by shares outstanding.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. The abnormal active attention in columns (1), (2), (4), and (5) are pre-market investor active attention (PMIAA) to EDGAR from 6:00 pm (the start of the Show) to 9:00 am (Market open) on the next day. The abnormal active attention in columns (3) and (6) are pre-market investor active attention (PMIAA) on EDGAR from 6:00 pm to 8:00 pm (2-hour window). We consider only institutional IPs in columns (1) to (3) and only retail IPs in columns (4) to (6) to calculate  $PMIAA_{i,t}$ . The data are from January 2010 to July 2017. The number of observations is 4,622,449. Control variables are the same as in Table 6 in the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	Institutional IP			Retail IP		
	(1)	(2)	2-hours (3)	(4)	(5)	2-hours (6)
$SHOW_{t-1}$	0.009*** (10.3)	0.007*** (8.4)	0.007*** (8.54)	0.008*** (10.03)	0.007*** (8.39)	0.007*** (8.29)
<i>Abnormal active attention<sub>t</sub></i>	0.0003*** (22.47)	0.0006*** (17.01)	0.0003*** (16.94)	0.0004*** (31.67)	0.0003*** (26.48)	0.0001*** (10.66)
<i>Abnormal active attention<sub>t</sub> * <math>SHOW_{t-1}</math></i>	0.001*** (3.19)	0.0006** (2.07)	-0.00001 (-0.01)	0.0018*** (3.88)	0.0009** (1.98)	0.0008*** (3.05)
<i>Control variables</i>	No	Yes	Yes	No	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.456	0.506	0.506	0.456	0.506	0.506

**Table SA.12: The impact of Guest interviews on Turnover on Mondays**

This table reports the results for turnover from a Guest interview on the show, Mad Money. The dependent variable is *Turnover*, which is the ratio of trading volume scaled by shares outstanding.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. Since the Show on Friday would affect the stock market the next Monday it is different from other days of the week of the Show. As a result, the specification in this table is designed to use different measurements of attention for Friday shows. In columns (1) and (4), the abnormal investor active attention is from 6:00 pm on Friday to 9:00 am on Monday (the whole weekend). In columns (2) and (5), the abnormal investor active attention is from 6:00 pm on Friday to 9:00 am on Saturday. In columns (3) and (6), the abnormal investor active attention is from 6:00 pm to 8:00 pm on Friday. The data for EDGAR are from 2006 to July 2017 and for Stocktwits are from January 2010 to December 2020. All regressions include firm, week, month, and year fixed effects (FE). Control variables are the same as in Table 6 in the main paper. t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	SEC EDGAR			Stocktwits		
	(1)	(2)	(3)	(4)	(5)	(6)
$SHOW_{t-1}$	0.007*** (4.65)	0.008*** (4.87)	0.008*** (8.54)	0.005*** (4.67)	0.006*** (5.03)	0.005*** (4.28)
<i>Abnormal active attention<sub>t</sub></i>	0.0001*** (25.91)	0.0001*** (12.7)	0.0001*** (10.52)	0.0004*** (16.58)	0.0003*** (25.42)	0.0009*** (27.01)
<i>Abnormal active attention<sub>t</sub></i> * $SHOW_{t-1}$	-0.0003 (0.65)	0.0003 (0.27)	-0.0003 (-0.31)	0.0023*** (2.99)	0.0012** (2.21)	0.0016*** (2.36)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i># of obs.</i>	797,903	797,903	797,903	816,489	816,489	816,489
<i>R-squared</i>	0.520	0.519	0.519	0.520	0.520	0.520

**Table SA.13: The impact on Turnover from Guest interviews excluding the EA windows**

This table reports the results for turnover from a Guest interview on the show, Mad Money. The dependent variable is *Turnover*, which is the ratio of trading volume scaled by shares outstanding.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. The abnormal investor active attention in columns (3) and (5) are pre-market investor active attentions (PMIAA) to EDGAR from 6:00 pm (start of the Show) to 9:00 am (Market open) on the next day. The abnormal investor active attentions in columns (4) and (6) are pre-market investor active attentions (PMIAA) to Stocktwits from 6:00 pm to 8:00 pm (2-hours or 2H window). Control variable definitions are provided in the Appendix to the main paper. We exclude days with earnings announcements (EAs) in the window from -7 to +3. The data for EDGAR are from 2006 to July 2017 and for Stocktwits are from January 2010 to December 2020. Control variable definitions are provided in the Appendix to the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	EDGAR (3)	EDGAR- 2H (4)	Stocktwits (5)	Stocktwits-2H (6)
$SHOW_{t-1}$	0.007*** (2.9)	0.008*** (6.13)	0.0076*** (6.83)	0.0071*** (7.33)	0.006*** (4.31)	0.006*** (4.54)
<i>Abnormal active attention<sub>t</sub></i>			0.0005*** (23.61)	0.0002*** (12.75)	0.0007*** (24.27)	0.0022*** (21.46)
<i>Abnormal active attention<sub>t</sub></i> * $SHOW_{t-1}$			0.0027*** (3.14)	0.0013*** (2.75)	0.0015*** (4.12)	0.0006* (1.66)
<i>Size</i>			-0.0015*** (-12.26)	-0.0015*** (-12.67)	-0.002*** (-15.95)	-0.0022*** (-16.03)
$Return_{t-1,y-29}$			-0.0003 (-0.57)	-0.0004 (-0.57)	0.001** (2.05)	0.0017** (2.13)
<i>Analyst</i>		0.004*** (14.88)	0.003*** (12.82)	0.0039*** (12.83)	0.004*** (14.99)	0.0048*** (14.83)
<i>Retail ownership</i>		-0.0005 (-0.55)	-0.0009 (-1.02)	-0.0009 (-1.01)	0.0009 (1.03)	0.0009 (1.05)
$Return_{t-1}$		0.0048*** (4.85)	0.0001*** (2.48)	0.0019*** (2.43)	0.006*** (4.59)	0.006*** (4.9)
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	5,296,791	4,045,071	3,068,276	3,068,276	3,110,862	3,110,862
<i>R-squared</i>	0.002	0.267	0.311	0.311	0.246	0.246

**Table SA.14: The impact on Turnover from Guest interviews on the Show for the full sample**

This table reports the results for the effect on turnover from a firm being mentioned on the show, Mad Money. The dependent variable is *Turnover*, which is the ratio of trading volume scaled by shares outstanding.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. The abnormal investor active attentions in columns (1), (3), (5), and (7) are pre-market abnormal investor active attentions ( $PMIA_{i,t}$ ) from 6:00 pm (the start of the Show) to 9:00 am (Market open) on the next day. The abnormal investor active attentions in columns (2), (4), (6), and (8) are pre-market abnormal investor active attentions ( $PMIAA$ ) from 6:00 pm to 8:00 pm (2-hours window). We consider only institutional IPs [columns (1) to (3)] and only retail IPs [columns (4) to (6)] to calculate  $PMIAA_{i,t}$ . We consider all non-robot queries on EDGAR in columns (1) and (2), only institutional IPs in columns (3) and (4), and only retail Ips in columns (5) and (6) to calculate  $PMIAA_{i,t}$ . We use the number of posts on Stocktwits to calculate pre-market abnormal investor active attention ( $PMIAA_{i,t}$ ) in columns (7) and (8). The data for EDGAR are from 2006 to July 2017 and for Stocktwits are from January 2010 to December 2020. All regressions include firm, week, month, and year fixed effects (FE). Control variables are the same as in Table 6 in the main text. t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	EDGAR						Stocktwits	
	Total (1)	Total-2H (2)	Inst (3)	inst-2H (4)	Retail (5)	Retail-2H (6)	total (7)	Total-2H (8)
$SHOW_{t-1}$	0.006*** (8.14)	0.006*** (8.56)	0.007*** (8.8)	0.007*** (8.98)	0.006*** (8.77)	0.006*** (8.67)	0.004*** (7.2)	0.004*** (7)
<i>Abnormal active attention<sub>t</sub></i>	0.0004*** (37.24)	0.0001*** (17.17)	0.0002*** (21.63)	0.0003*** (18.24)	0.0002*** (23.67)	0.0001*** (15.05)	0.0006*** (43.95)	0.0010*** (40.31)
<i>Abnormal active attention<sub>t</sub></i> * $SHOW_{t-1}$	0.0020*** (3.22)	0.0010*** (3.2)	0.0006*** (2.24)	0.0001 (0.19)	0.0008*** (2.23)	0.0008*** (3.18)	0.0015*** (4.98)	0.0010*** (3.89)
<i>Control var.</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i># of obs.</i>	5,086,259	5,086,259	5,086,259	5,086,259	5,086,259	5,086,259	4,831,285	4,831,285
<i>R-squared</i>	0.517	0.516	0.516	0.516	0.516	0.516	0.516	0.517

**Table SA.15: The effect on the PI for Robinhood users for stocks mentioned on Mad Money Show**

This table reports the results for the popularity index (PI) for Robinhood users from a firm being mentioned on the show, Mad Money. The dependent variable is the % *daily change in the PI*. In Panels A and B,  $SHOW_t$  is a dummy variable equal to 1 for a Guest interview representing stock  $i$  on day  $t$  and 0 otherwise. In Panel A, the dependent variable is % *daily change in the PI* close to close (columns 1 through 4), close to open (column 5), and open to close during the same day (column 6). The *abnormal active attention* in column (3) (column 4) is pre-market investor active attention (PMIAA) to Stocktwits from 6:00 pm to 9:00 am on the next day (6:00 pm to 8:00 pm on the same day). In Panel B, the effects of Guest interviews on day=2 (column 1) to day=7 (column 6) after the day of the Show are tested. The % changes over 2-days, 5-days, and 10 days in the PI are tested in columns (7), (8), and (9). In Panel B, we use all recommendations on the Show in column (1), buy and sell mentions/recommendations in columns (2) and (3), positive (F+) and negative (F-) mentions/recommendations of Featured stocks in columns (4) and (5), and positive (D&LR+) and negative (D&LR-) mentions/recommendations in the Discussed and Lightning rounds in columns (6) and (7). Control variable definitions are provided in the Appendix. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: % Change in PI on the next day after a Guest interview</b>						
	Close-Close				Close-Open	Open-Close
	(1)	(2)	(3)	(4)	(5)	(6)
$SHOW_{t-1}$	1.878*** (13.04)	1.600*** (11.08)	1.181*** (7.21)	1.145*** (6.52)	0.542*** (11.55)	0.839*** (8.41)
$Abnormal\ active\ attention_t$			0.271*** (3.02)	0.191*** (3.2)		
$Abnormal\ active\ attention_t^*$			0.037*** (23.92)	0.032*** (19.96)		
$Show_{t-1}$						
$\%Change_{t-1}$		0.268*** (39.03)	0.251*** (37.15)	0.252*** (37.29)	0.076*** (35.63)	0.174*** (34.47)
$Size$		0.002 (0.65)	0.004 (1.12)	0.003 (0.9)	-0.003** (-2.18)	0.008*** (2.73)
$Return_{t-29,t-1}$		-0.269*** (-7.34)	-0.299*** (-8.46)	-0.295*** (-8.33)	-0.070*** (-6.31)	-0.218*** (-7.51)
$Analyst$		0.0006 (0.07)	0.005 (0.65)	0.003 (0.4)	-0.003 (-1.16)	0.005 (0.68)
$Earning\ announcement_t$		1.497*** (28.94)	1.368*** (25.98)	1.425*** (27.2)	0.098*** (9.73)	1.307*** (30.65)
$Earning\ announcement_{t-1}$		-0.342*** (-9.62)	-0.404*** (-10.94)	-0.386*** (-10.49)	-0.192*** (-16.2)	-0.172*** (-5.95)
$Earning\ announcement_{t-2,t-7}$		-0.200*** (-22.69)	-0.219*** (-22.79)	-0.211*** (-22.18)	-0.034*** (12.54)	-0.166*** (-21.44)
$Retail\ ownership$		0.096*** (5.51)	0.083*** (5.03)	0.089*** (5.32)	0.031 (4.92)	0.067*** (4.99)
$Return_{t-1}$		2.732*** (26.18)	1.807*** (16.54)	1.826*** (16.71)	1.273*** (32.56)	1.228*** (15.07)
$Firm\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
$Weekday, Month, Year\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
$Number\ of\ Obs.$	587,630	587,630	474,573	474,573	587,630	587,630
$R-squared$	0.05	0.152	0.147	0.147	0.103	0.115

<b>Panel B: % Change in PI (N = 587,630)</b>							
	AnySection	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<i>SHOW</i>	0.528*** (15.27)	0.654*** (14.12)	0.173*** (4.53)	1.205*** (7.09)	-0.022 (-0.11)	0.486*** (12.88)	0.185*** (4.73)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.150	0.150	0.150	0.149	0.149	0.149	0.149

**Table SA.16: Effect on PI for Robinhood users from Guest interviews on Mad Money on Fridays**

This table reports the results for the popularity index (PI) for Robinhood users from a Guest interview on the show, Mad Money. The dependent variable is the % daily change in the PI.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. Since the Show on Friday would affect the stock market the next Monday, it is different from other days of the Show. As a result, the specification in this table is designed to use different measurements of abnormal investor active attention for Friday Shows. In column (1), the abnormal investor active attention is from 6:00 pm on Friday to 9:00 am on Monday (the whole weekend). In column (2), the abnormal investor active attention is from 6:00 pm on Friday to 9:00 am on Saturday. In column (3), the abnormal investor active attention is from 6:00 pm to 8:00 pm on Friday. Control variables are the same as in Table 7 in the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	(1)	(2)	(3)
$SHOW_{t-1}$	1.433*** (3.3)	1.534*** (3.85)	1.726*** (2.95)
<i>Abnormal active attention<sub>t</sub></i>	0.079*** (18.29)	0.294*** (11.28)	0.037*** (11.4)
<i>Abnormal active attention<sub>t</sub> * SHOW<sub>t-1</sub></i>	0.0594 (0.16)	-0.018 (-0.1)	-0.108 (-0.48)
<i>Control Variables</i>	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes
<i>Number of Obs.</i>	113,078	113,078	113,078
<i>R-squared</i>	0.194	0.194	0.194

**Table SA.17: Effect on PI for Robinhood users from Guest interviews for stocks mentioned on Mad Money excluding EA windows**

This table reports the results for the popularity index (PI) for Robinhood users from Guest interviews for stocks mentioned on the show, Mad Money. The dependent variable is the % daily change in the PI.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. The dependent variable is % daily change in the PI close to close [columns (1) through (4)], close to open [column (5)], and open to close during the same day [column (6)]. The abnormal investor active attention in column (3) [column (4)] is pre-market abnormal investor active attention or PMIAA to Stocktwits from 6:00 pm to 9:00 am on the next day (6:00 pm to 8:00 pm on the same day). Control variable definitions are provided in the Appendix to the main paper. We exclude days with earnings announcements (EAs) in the window from -7 to +3. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	Close-Close				Close-Open	Open-Close
	(1)	(2)	(3)	(4)	(5)	(6)
$SHOW_{t-1}$	1.989*** (11.63)	1.630*** (10.07)	1.154*** (7.19)	1.077*** (6.37)	0.592*** (9.68)	0.743*** (7.91)
$Abnormal\ active\ attention_t$			0.036*** (21.6)	0.030*** (31.03)		
$Abnormal\ active\ attention_t * SHOW_{t-1}$			0.412*** (3.57)	0.257*** (3.56)		
$\%Change_{t-1}$		0.275*** (31.08)	0.271*** (30.96)	0.272*** (31.03)	0.075*** (27.98)	0.181*** (26.52)
$Size$		0.008* (1.98)	0.009** (2.22)	0.009** (2.11)	-0.003*** (-2.68)	0.013*** (3.69)
$Return_{t-1,y-29}$		-0.264*** (7.29)	-0.275*** (-7.56)	-0.270*** (-7.51)	-0.052*** (-4.32)	-0.229*** (7.75)
$Analyst$		-0.006 (-0.63)	-0.003 (-0.34)	-0.005 (-0.55)	0.000 (-0.02)	-0.004 (-0.54)
$Retail\ ownership$		0.095*** (5.18)	0.095*** (5.21)	0.102*** (5.5)	0.021*** (3.61)	0.074*** (5.03)
$Return_{t-1}$		2.134*** (18.9)	2.09*** (18.62)	2.111*** (18.8)	1.081*** (24.61)	0.807*** (8.45)
$Firm\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
$Weekday, Month, Year\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
$Number\ of\ Obs.$	523,407	429,364	429,364	429,364	399,324	399,321
$R-squared$	0.051	0.140	0.142	0.141	0.089	0.100



**Table SA.18: The impact of Show mentions on short sales**

This table reports the impact on short sales when a firm is mentioned on the show, Mad Money. The dependent variable is the *Short Sale ratio*, which is the ratio of the volume of shares shorted at Cboe exchanges (off-exchange) to the total CRSP share volume (total off-exchange volume) for Cboe (FINRA). The retail short-sale ratio is the volume of shares shorted by retail investors to the total off-exchange volume for FINRA. In Panel A and E,  $SHOW_t$  is a dummy variable equal to 1 for a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. In Panel B, C and D,  $SHOW_t$  is buy (Buy) and sell (Sell) mentions/recommendations in columns (1) and (2), positive (F+) and negative (F-) mentions/recommendations of Featured stocks in columns (3) and (4), and positive (D&LR+) and negative (D&LR-) mentions/recommendations in the Discussed and Lightning rounds in columns (5) and (6). In Panel D, we consider all non-robot queries on EDGAR in columns (1) and (5), only institutional IPs in columns (2) and (6), and only retail IPs in columns (3) and (7), and the number of posts on Stocktwits in columns (4) and (8) to calculate pre-market abnormal investor active attention (PMIAA). Control variables are the same as in Table 8 in the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: The effect on the short sales ratio after Guest Interviews</b>							
	(1)	(2)	FINRA				(7)
	Cboe	Cboe	(3)	(4)	(5)	(6)	Cboe+FINRA
	Total	Total	Total	Total	Retail	Retail	
$SHOW_{t-1}$	-0.001 (-0.75)	-0.004*** (-3.46)	0.018*** (4.19)	0.008** (1.84)	0.007*** (9.95)	0.007*** (9.27)	0.019*** (6.64)
$Size$		0.001** (1.75)		-0.002 (-1.95)		-0.001*** (-3.90)	-0.010*** (-13.83)
$Return_{t-1,t-29}$		0.004*** (5.74)		-0.009*** (-3.55)		0.000*** (8.23)	0.014*** (8.03)
$Analyst$		0.006*** (7.05)		0.014*** (6.87)		0.001* (1.53)	0.021*** (11.74)
$EA_t$		-0.002*** (-8.12)		0.0134*** (7.76)		0.002*** (11.39)	0.018*** (19.96)
$EA_{t-1,t-7}$		-0.002*** (-9.43)		-0.003*** (-3.74)		0.001*** (13.76)	0.005*** (9.54)
$Retail\ ownership$		0.003** (0.07)		-0.015*** (-3.59)		0.007*** (8.23)	0.043*** (11.36)
$Return_{t-1}$		0.039*** (28.19)		0.356*** (42.14)		0.003*** (2.84)	0.165*** (35.12)
$Firm\ FE$	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$Weekday, Month, Year\ FEs$	Yes	Yes	Yes	Yes	Yes	Yes	Yes
$\# of obs.$	6,484,850	5,208,441	6,280,646	4,622,599	6,17,611	4,572,155	4,596,798
$R-squared$	0.83	0.84	0.871	0.874	0.368	0.378	0.878

Panel B: Dependent variable: Off-exchange Total Short-sale ratio						
	Buy (1)	Sell (2)	F+ (3)	F- (4)	D&LR+ (5)	D&LR- (6)
$SHOW_{t-1}$	0.001 (0.27)	-0.007*** (-2.94)	0.013 (0.013)	-0.018** (-2.27)	-0.001 (-0.031)	-0.007*** (-2.75)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	4,622,599	4,622,599	4,622,599	4,622,599	4,622,599	4,622,599
<i>R-squared</i>	0.875	0.875	0.875	0.875	0.875	0.875

Panel C: Dependent variable: Retail Short-sale ratio						
	Buy (1)	Sell (2)	F+ (3)	F- (4)	D&LR+ (5)	D&LR- (6)
$SHOW_{t-1}$	0.007*** (6.48)	0.002*** (4.37)	0.010*** (6.5)	0.007*** (3.94)	0.007*** (5.67)	0.002*** (4.02)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	4,572,155	4,572,155	4,572,155	4,572,155	4,572,155	4,572,155
<i>R-squared</i>	0.37	0.37	0.37	0.37	0.37	0.37

Panel D: Dependent variable: Cboe short-sale ratio						
	Buy (1)	Sell (2)	F+ (3)	F- (4)	D&LR+ (5)	D&LR- (6)
$SHOW_{t-1}$	-0.004*** (2.99)	0.001 (-0.11)	-0.007*** (3.89)	-0.006*** (-3.88)	-0.003** (-2.37)	0.001 (0.37)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	5,208,441	5,208,441	5,208,441	5,208,441	5,208,441	5,208,441
<i>R-squared</i>	0.84	0.84	0.84	0.84	0.84	0.84

Panel E: Dependent variable: off-exchange Short-sale ratio and Retail Short-sale ratio								
	off-exchange Short-sale ratio				Retail Short-sale ratio			
	EDGAR	Institutional IP	Retail IP	Stocktwits	EDGAR	Institutional IP	Retail IP	Stocktwits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>SHOW<sub>t-1</sub></i>	0.003 (0.59)	0.007 (1.04)	0.006 (0.91)	0.009 (1.14)	0.004*** (4.44)	0.004*** (5.24)	0.004*** (4.64)	0.007*** (7.61)
<i>Abnormal active attention<sub>t</sub> * SHOW<sub>t-1</sub></i>	0.009** (1.87)	0.001 (0.23)	0.003 (0.72)	0.001 (0.02)	0.002** (2.03)	-0.001 (-0.61)	0.001*** (2.60)	0.001* (1.75)
<i>Abnormal active attention<sub>t</sub></i>	0.001 (0.14)	0.001*** (4.52)	0.001 (1.33)	0.001*** (3.61)	0.001 (1.61)	0.001** (2.01)	0.001** (2.45)	0.001*** (4.33)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	3,287,116	3,287,116	3,287,116	4,460,787	3,270,859	3,270,859	3,270,859	4,411,794
<i>R-squared</i>	0.871	0.871	0.871	0.87	0.34	0.34	0.34	0.38

**Table 19: The impact of Show mentions on institutional trading**

This table reports the impact on institutional trading from a firm being mentioned on the show, Mad Money. The dependent variables are the abnormal institutional order flow ( $AInOF_{i,t}$ ) in columns (1)-(4) and abnormal institutional volume ( $AInVOL_{i,t}$ ) in columns (5)-(8) using data from the ANcerno database.  $AInOF_{i,t}$  ( $AInVOL_{i,t}$ ) is  $InOF_{i,t}$  ( $InVOL_{i,t}$ ) minus the average daily institutional order flow over [-90,-30] window.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise in columns (1), (2), (5), and (6). We use positive mentions/recommendations of Featured stocks in columns (3) and (7) and their positive counterparts in columns (4) and (8). Control variable definitions are provided in the Appendix. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	$AInOF_{i,t}$				$AInVOL_{i,t}$			
	(1) interview	(2) interview	(3) F+	(4) F-	(5) interview	(6) interview	(7) F+	(8) F-
$SHOW_{t-1}$	0.0055 (0.68)	0.0046 (0.57)	-0.0014 (0.32)	-0.0077 (-0.74)	0.0263*** (2.48)	0.0167* (1.66)	0.0164*** (3.31)	-0.0428 (-1.07)
Size		-0.0002*** (-2.98)	-0.0002*** (-2.88)	-0.0002*** (-2.88)		0.0004*** (3.09)	0.0003*** (2.98)	0.0004*** (3.11)
$Return_{t-1,t-29}$		0.0503*** (15.58)	0.0503*** (15.58)	0.0503*** (15.58)		0.0643*** (18.03)	0.0643*** (18.01)	0.0643*** (17.99)
Analyst		0.0011*** (4.47)	0.0011*** (4.47)	0.0011*** (4.47)		-0.0017*** (-5.1)	-0.0017*** (-5.14)	-0.0017*** (-5.04)
$EA_t$		-0.0065*** (-4.84)	-0.0066*** (-4.85)	-0.0066*** (-4.58)		-0.0017** (10.68)	0.0352*** (10.69)	0.0352*** (10.68)
$EA_{t-1,t-7}$		0.0038*** (5.11)	-0.0038*** (5.12)	0.0038*** (5.12)		0.0290*** (25.37)	0.0290*** (25.25)	0.0291*** (25.31)
Retail ownership		0.0052*** (8.18)	0.0052 (8.18)	0.0052*** (8.18)		-0.0017** (1.99)	-0.0017*** (2.01)	-0.0017** (-1.99)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	1,894,305	1,748,984	1,748,984	1,748,984	2,030,325	1,886,899	1,886,899	1,886,899
R-squared	0.001	0.001	0.001	0.001	0.009	0.015	0.015	0.015

**Table SA.20: Average cumulative abnormal returns (ACARs) over the 20-day post-Show for stocks recommended/mentioned on Mad Money**

This table reports the result for the average cumulative abnormal returns (ACARs) for the window [1, 20] for a firm after being mentioned/recommended on the show, Mad Money. The abnormal return (AR) for each firm is computed using the Fama-French five-factor model to estimate the beta coefficients over a 200 trading-day estimation window [-230, -30]. The betas are then used to calculate the expected returns over the event window [1, 20]. Abnormal return ( $AR_{i,t}$ ) is the difference between expected and actual returns. The cumulative abnormal returns are given by:  $CAR_{i,t} = \sum_1^{20} AR_{i,t}$ . Day 0 is the date the stock is mentioned or recommended on the Show. Since the Show airs at 6:00 pm, the Show's effects on price are expected to begin on day 1. We use buy and sell mentions/recommendations in columns (1) and (2), positive and negative mentions/recommendations of Featured stocks in columns (3) and (4), and positive and negative mentions/recommendations in the Discussed and Lightning rounds in columns (5) and (6) for the  $SHOW_t$  variable. Control variables are the same as in Table 10 in the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)
$SHOW_{t-1}$	-0.0109*** (-6.63)	0.0112*** (6.7)	0.0007 (0.28)	0.0031 (0.39)	-0.0095*** (-7.13)	0.0112*** (6.54)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Number of Obs.	19379	8406	1811	420	15348	7977
R-squared	0.023	0.023	0.020	0.020	0.023	0.023

**Table SA.21: The effect on 2-hour abnormal investor active attention of a stock from a Show mention**

This table reports the effects on abnormal investor attention from a firm being mentioned on the show, Mad Money. Abnormal 2-hour attentions are calculated by the logarithm of the ratio of the number of queries (tweets) on SEC EDGAR (Stocktwits) regarding a firm's mention on the Show for every 2 hours around the Show Day (day T) divided by the median number of queries (tweets) on SEC EDGAR (Stocktwits) for the same time of the day for that stock on the same weekday during the past eight weeks.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

<b>Panel A: Abnormal investor active attention to EDGAR in two-hour segments around the Show</b>					
	[10:00,12:00]	[12:00,14:00]	[14:00,16:00]	[16:00,18:00]	[18:00,20:00]
	(1)	(2)	(3)	(4)	(5)
$SHOW_{t-1}$	0.255*** (6.51)	0.361*** (9.82)	0.391*** (10.40)	0.304*** (8.45)	0.417*** (12.04)
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Number of Observations</i>	101,096,068	101,096,068	101,096,068	101,096,068	101,096,068
<i>R-squared</i>	0.012	0.012	0.012	0.012	0.012
<b>Panel B: Abnormal investor active attention to Stocktwits in two-hour segments around the Show</b>					
	[10:00,12:00]	[12:00,14:00]	[14:00,16:00]	[16:00,18:00]	[18:00,20:00]
	(1)	(2)	(3)	(4)	(5)
$SHOW_{t-1}$	0.396*** (10.09)	0.472*** (9.96)	0.452*** (10.28)	0.508*** (11.30)	1.678*** (27.52)
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Number of Observations</i>	101,698,163	101,698,163	101,698,163	101,698,163	101,698,163
<i>R-squared</i>	0.031	0.031	0.031	0.031	0.031

**Table SA.22: The abnormal returns around Guest Interviews**

This table reports the results for the dependent variable, *abnormal return* ( $AR$ ), for the days around a firm mention/recommendation on the show, Mad Money.  $AR$ s are computed using the Fama-French five-factor model. Beta coefficients estimated over a 200 trading-day estimation window  $[-230, -30]$  are used to calculate the expected returns over various event windows. *Abnormal return* ( $AR_{i,t}$ ) is the difference between expected and actual returns. Day 0 is the date the stock is mentioned or recommended on the Show, which starts at 6:00 pm. We use  $AR_{i,t}$  for  $D_0$  in column (1),  $D_{-1}$  in column (2) and  $D_1$  in columns (3) to (8).  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise.  $SAA_{D=1}$  is the surprise abnormal attention on  $D_1$  and  $EAA_{D=1}$  is the expected abnormal attention on  $D_1$ . Control variables are the same as in Table 10. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level respectively.

Windows =	[0,0]	[-1,-1]	[1,1]	[1,1]	[1,1]	[1,1]	[1,1]	[1,1]
			EDGAR	EDGAR	EDGAR	Stocktwits	Stocktwits	Stocktwits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$SHOW_{D=0}$	0.0038*** (6.28)	0.0001 (0.13)	0.0044*** (5.14)	0.0047*** (3.96)	0.0042*** (4.39)	0.0034*** (5.18)	0.0027*** (3.96)	0.0019*** (2.76)
$SAA_{D=1}$			0.0003 (1.09)		0.0003 (1.10)	0.0002* (1.75)		0.0002* (1.79)
$SHOW_{D=0} * SAA_{D=1}$			0.0016* (1.85)		0.0018* (1.83)	0.0007** (2.08)		0.0008** (2.32)
$EAA_{D=1}$				-0.0001 (-0.35)	0.0001 (0.21)		0.0000 (0.22)	0.0001 (0.55)
$SHOW_{D=0} * EAA_{D=1}$				-0.0005 (-0.58)	0.0004 (0.40)		0.0011** (2.13)	0.0012** (2.35)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Number of Obs.</i>	19345	19345	13405	13469	13405	20585	20585	20585
<i>R-squared</i>	0.011	0.001	0.013	0.012	0.013	0.009	0.009	0.010

**Table SA.23: The effect on abnormal investor active attention for the stock of a Guest interview controlling for other news**

This table reports the results on abnormal investor active attention from a Guest interview for a firm on the show, Mad Money. The dependent variable is Daily abnormal investor active attention ( $DAIAA_{i,t}$ ), which is the abnormal investor active attention based on access to the files available on SEC EDGAR or the number of posts on Stocktwits related to a firm  $i$  on day  $t$ . The window to measure  $DAIAA_{i,t}$  is from 6:00 pm (Show's start time) to the start of the next day's Show at 6:00 pm. Abnormal investor active attention is calculated as the logarithm of the ratio of the number of queries on SEC EDGAR (posts on Stocktwits) regarding a firm over the median number of queries on the same window during the last 8 weeks for the same firm.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. Daily (Weekly) Abnormal news is the logarithm of the ratio of daily (weekly) number of news regarding a firm over the median number of news on the same weekday (over a week) during the last 8 weeks. AInAA (AReAA) is a dummy variable, which is equal to 1 if the abnormal institutional (retail) active attention is higher than 94% of the firm's daily abnormal institutional attention during the last 30 days. For  $News_{t-2}$ , we use daily abnormal news in columns (1) and (4), weekly abnormal news in columns (2) and (5) and AInAA in columns (3) and AReAA in (6). Control variable definitions are provided in the Appendix to the main paper. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* denote significance at the 1%, 5% and 10% level, respectively.

	EDGAR			Stocktwits		
	(1) Daily Abnormal news	(2) Weekly Abnormal news	(3) AInAA	(4) Daily Abnormal news	(5) Weekly Abnormal	(6) AReAA
$Show_{t-1}$	0.174*** (6.82)	0.184*** (7.9)	0.220*** (7.93)	0.514*** (16.98)	0.536*** (16.73)	0.582*** (17.88)
$News_{t-2}$	0.104*** (95.5)	0.109*** (87.41)	0.154*** (46.98)	0.179*** (87.26)	0.173*** (78.87)	0.388*** (66.40)
$VIX_{t-1}$	-0.969*** (-5.34)	-0.869*** (4.67)	-1.183*** (5.25)	-0.003*** (-17.36)	-0.03*** (-14.57)	-0.003*** (-10.71)
$Market\ return_{t-1,y-29}$	-0.550*** (-18.31)	-0.524*** (-19.43)	-0.356*** (-11.32)	0.098*** (3.03)	0.094*** (2.72)	0.066* (1.67)
$Analyst$	-0.0001 (-0.26)	-0.0001 (-0.47)	-0.001*** (-3.42)	-0.001*** (-6.31)	-0.001*** (-5.99)	-0.002*** (6.39)
$Retail\ ownership$	0.004 (0.81)	0.005 (0.93)	-0.017*** (2.97)	-0.052*** (-6.87)	-0.049*** (-6.13)	-0.082*** (-8.54)
$Return_{t-1}$	-0.148*** (-5.6)	-0.054** (-2.03)	-0.093*** (-3.03)	0.793*** (23.7)	0.859*** (23.59)	0.809*** (21.6)
$\ln(Market\ Cap_{t-1})$	0.002 (3.1)	0.001 (0.67)	0.001 (0.9)	-0.015*** (-11.14)	-0.019*** (-13.14)	-0.019*** (-10.18)
$\ln(Turnover_{t-1,t-29})$	0.012*** (7.78)	0.008*** (5.34)	0.015*** (7.81)	-0.015*** (-6.64)	-0.019*** (-7.47)	-0.016*** (-5.22)
$Return_{t-1,t-29}$	-0.009 (-0.76)	-0.0137 (-1.11)	0.030** (2.08)	0.175*** (10.33)	0.175*** (9.93)	0.206*** (10.19)
$Firm\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
$Weekday, Month, Year\ FE$	Yes	Yes	Yes	Yes	Yes	Yes
$\# of\ observations$	1322177	1256994	1070521	2059864	1912402	1757958
$R-squared$	0.074	0.070	0.056	0.171	0.157	0.134



**Table SA.24: Heterogeneous effect of Guest interviews on the Show on the abnormal investor active attention of viewers**

This table reports the results on abnormal investor active attention from a firm being mentioned on the show, Mad Money. The dependent variable is  $DAIAA_{i,t}$ , which is the daily abnormal investor active attention to SEC EDGAR or Stocktwits related to firm  $i$  on day  $t$ . Abnormal investor active attention to SEC EDGAR (Stocktwits) is calculated as the logarithm of the ratio of the number of queries on SEC EDGAR (number of posts on Stocktwits) regarding a firm over the median number of queries (posts) on the same weekday during the last 8 weeks for the same firm.  $SHOW_t$  is a dummy variable equal to 1 if there was a Guest interview representing stock  $i$  on day  $t$  and is equal to 0 otherwise. The Dummy variable is equal to 1 if the firm is in the lowest quantile of size in column (1), turnover in column (2), highest retail ownership in column (3), the lowest number of analysts in column (4), during the financial crisis in column (5), on Fridays in column (6) or the firm was mentioned previously on the Show during the last 7 or 30 days in column (7) and (8), respectively, and 0 otherwise. We use the number of recommendations or interviews in interaction with the Show dummy in columns (9) and (10). The dummy variable is equal to 1 if the value-weighted daily return of the applicable stock Market Index (NYSE/AMEX/NASDAQ/ARCA) is in the top 1% annually in column (11) and in the bottom 1% annually in column (12). The dummy variable is equal to 1 during the Olympics in column (13), for the weekend of the Superbowl in column (14), and for days where the time devoted to the top 3 news events in US broadcast is at the top 10% annually in column (15). We report the results for SEC EDGAR and Stocktwits in Panels A and B respectively. All regressions include firm, week, month, and year fixed effects (FE). t-statistics are reported in the parentheses using standard errors clustered by firm. \*, \*\*, \*\*\* signify significance at the 1%, 5% and 10% level, respectively.

**Panel A:** Abnormal investor active attention to Edgar (N = 11,865,791)

	Size	Turnover	Retail	Analyst	F-crisis	Friday	Recent show 7D	Recent show 30D	Number of Recomm	Number of interviews	Market top 1% return	Market bottom 1% return	Olympics	Superbowl	News pressure
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
<i>SHOW</i>	0.244*** (11.29)	0.242*** (11.01)	0.242*** (10.75)	0.232*** (11.09)	0.232*** (10.26)	0.233*** (11.07)	0.243*** (10.68)	0.259*** (10.71)	0.279*** (7.71)	0.244*** (8.52)	0.237*** (11.07)	0.237*** (11.04)	0.193*** (12.06)	0.193*** (12.18)	0.187*** (11.34)
<i>DumVar</i>	-0.008*** (-4.42)	0.060*** (27.14)	0.011*** (3.75)	0.147*** (8.39)	-0.095*** (-24.89)	-0.012*** (-6.39)	0.008*** (3.06)	0.003* (1.92)	0.005*** (89.14)	0.032*** (61.66)	-0.018*** (-4.04)	0.075*** (15.49)	0.074*** (18.57)	0.044*** (9.60)	0.013*** (12.47)
<i>SHOW* DumVar</i>	-0.105 (-0.088)	-0.138** (-2.11)	-0.070 (-1.13)	0.040 (0.54)	0.056 (0.88)	0.014 (0.21)	-0.048 (-1.14)	-0.061 (-1.42)	0.004** (-2.21)	-0.014 (-1)	-0.137 (-0.8)	-0.180 (-1.03)	-0.171 (-1.01)	0.053 (0.42)	0.036 (0.81)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm, Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.112	0.112	0.112	0.112	0.112	0.112	0.112	0.112	0.114	0.112	0.112	0.112	0.112	0.112	0.112

**Panel B:** Abnormal investor active attention to Stocktwits (N = 11,981,151)

	Size	Turnover	Retail	Analyst	Friday	Recent show 7D	Recent show 30D	Number of Recomm	Number of interviews	Market top 1% return	Market bottom 1%return	Olympics	Superbowl	News pressure
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(13)	(14)	(15)
<i>SHOW</i>	0.979*** (21.23)	0.993*** (21.34)	0.984*** (20.7)	0.986*** (22.51)	0.991*** (20.58)	0.997*** (21.87)	0.719*** (3.41)	1.022** (16.01)	1.044*** (18.2)	0.984*** (21.98)	0.989*** (21.84)	0.990*** (21.04)	0.990*** (20.94)	0.920*** (18.40)
<i>DumVar</i>	0.017*** (2.52)	0.223*** (41.43)	0.003 (0.4)	0.073*** (12.77)	0.054*** (13.07)	0.52*** (7.93)	-0.270*** (-53.56)	0.003*** (29.59)	0.033*** (30.41)	-0.022*** (-2.56)	0.186*** (19.79)	-0.007 (-1.49)	-0.332 (-1.19)	-0.006*** (5.28)
<i>SHOW* DumVar</i>	0.419* (1.93)	-0.221* (-1.72)	0.090 (0.84)	0.409** (2.57)	0.032 (0.3)	-0.077 (-1)	0.283 (1.32)	-0.003 (-0.92)	-0.051* (-1.71)	0.916** (2.44)	0.244 (0.73)	-0.764 (-1.33)	-0.332 (-1.19)	-0.061 (-0.96)
<i>Control variables</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Firm, Weekday, Month, Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>R-squared</i>	0.090	0.090	0.090	0.088	0.090	0.090	0.093	0.090	0.090	0.090	0.090	0.090	0.090	0.090