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

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Abstract

We study the effects of the popular Mad Money Show on the attention of investors and financial market outcomes. We find that the Show's recommendations significantly affect investor attention, proxied by SEC EDGAR queries and posts on Stocktwits. The magnitudes of the effects depend on the direction of the recommendations (buy or sell) and the emphasis allocated to a stock on the Show. This induced investor attention subsequently affects the trading volumes and the portfolios of retail investors. While stock recommendations on the Show affect the average cumulative abnormal returns (ACAR) on the following day, the effect reverses over the following 20 days. Furthermore, the significantly positive (negative) initial ACARs for buy (sell) recommendations on the Show become significantly negative (positive) by day 20. Overall, our findings are consistent with the impact of the Media on the limited attention of investors and the short-term price pressure associated with noise traders.

Keywords: Investor attention, Media, Market efficiency, Retail (Robinhood) investors, SEC EDGAR, Stocktwits.
JEL: G11, G12, G14.

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"There is always a bull market somewhere, and I will try to find it for you." 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 capacity to a small subset of stocks in that universe. 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).

In this paper, we focus on one of the most well-known TV shows about the stock market. The show, Mad Money, was launched in 2005, is hosted by Jim Cramer, and is recorded on CNBC.[1] 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 CEOs, and giving stock recommendations. The timing of the Show which follows the market closure, and the clear recommendations to buy or sell specific stocks given on the Show allow us to identify the effects of the Show on market activities for stocks mentioned on the Show. Therefore, we use the Mad Money Show as an experimental laboratory to study the association between the media and the stock market through two attention channels. In particular, we test whether the Show affects the attention of investors, and assess the impact of this induced attention on the stocks mentioned on the Show.

Our sample represents all mentions and recommendations on the Mad Money Show from June 2006 to December 2020. The impact of the Show on the behaviors of investors is measured using two indexes (channels) of investor attention. First, we use the log of the activity on the SEC EDGAR server for accessing the financial information of a firm (Chi and Shanthikumar, 2018). Second, we count the number of posts on Stocktwits (Cookson and Niessner, 2020), a social media platform that is focused on the stock market with more than 2 million active users.[2] Based on the theory of information acquisition, we conjecture that a rational economic agent trades off the cost of acquiring and analyzing information with

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[1] We alternatively refer to the Mad Money Show as the 'Show'.
[2] According to Wikipedia at: https://en.wikipedia.org/wiki/StockTwits

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 indexes of abnormal attention reflect the perceived benefits for viewers of the Show. We find that a recommendation or mention of a stock on the Mad Money Show significantly affects both measurements of attention. On average, a guest interview on the Show leads to an increase of 27% (169%) of daily attention to EDGAR (Stocktwits). The magnitude of the effect is significant but expectedly lower when benchmarked to the average attention to EDGAR (Stocktwits) increases of 85.5% (348.1%) on earnings announcement dates. While Cramer covers several stocks in the Lightning round and Discussion segment of the Show, Cramer allocates more time and explanations to the allocated Featured stocks and Guest interviews. As expected the effect on investor attention and its market impact are heterogeneous across the different segments of the Show consistent with the time and information the Show's host allocates to specific firms in each segment.

While one might expect the viewers of the Show to consist of mainly retail investors due to the Show's content, we test whether the Show affects the attention of institutional investors. We classify queries on SEC EDGAR based on the identity of the IPs of owners into retail and institutional investors (e.g. JPMorgan Chase, Morgan Stanley, Citicorp). We find that the Show also impacts the behaviors of the arguably more sophisticated institutional investors and that this impact is smaller than that for retail investors.

We find a significant effect of the Show on the volume of transactions of recommended or mentioned stocks on the Show. On average, turnover increases by 0.7% (0.8%) on the day after a Guest interview (Featured stock) on the Show. The amount is significant when benchmarked to the average daily turnover (1.15%) and increases on earnings announcement dates (0.9%). The interaction term between the recommendations on the Show and abnormal attention also is significant and positive. This demonstrates that our attention indexes, which measure the costly act of acquisition and processing of information, reflect the (perceived) importance of recommendations by investors who subsequently trade the stock.

We then use the Robinhood trading platform to further analyze the Show's effect on retail investor behavior. We find that the Show significantly affects the daily changes of the popularity index (PI), which measures the number of Robinhood users who hold the stock. On average, a Guest interview appearance on the Show increases the PI by 1.6% on the next day. We also find that abnormal attention induced by the Show significantly affects the changes in the aggregate holdings of Robinhood users, consistent with Robinhood users seeking more "limelighted" stocks. However, the effect is short-term as PI returns to its pre-interview level within ten days after the Show. This finding is consistent with the tendency of Robinhood investors to engage in attention-induced trading (Barber, Odean, and Schwarz, 2020).

We also report evidence that mentions on the Mad Money Show significantly affect stock prices on the days following the Show. Guest interviews lead to a +47 basis point average abnormal return on the next day which starts to dissipate over the next few days. The average cumulative abnormal return (ACAR) over 20 days after a Guest interview on the Show is insignificant. The significantly positive initial ACAR varies for the different segments of the Show but also becomes insignificant by day 20. To illustrate, the recommendations of featured stocks compared to stocks on the Discussed/Lightning rounds lead to higher initial ACAR, and also increased abnormal attention and more transactions. The significantly positive (negative) initial ACAR for buy (sell) recommendations on the Show become significantly negative (positive) by day 20. To summarize, our findings suggest that while the Mad Money Show can significantly affect the attention and short-term behavior of investors, the pattern of stock prices after a recommendation on the show are consistent with short-term price pressure, increased noise trading and potentially profitable opportunities for contrarian trading.

Our paper contributes to four strands of the literature. First, it adds to the literature on the effect of the Mad Money Show on the financial market. This literature includes the following findings. First, stock recommendations on the Mad Money Show have a significant effect on the next day's return with most of the effect captured by the opening price (Neumann and Kenny, 2007) which is temporary as it is subsequently reversed. This is a result consistent with the price pressure of uninformed trading instead of value-relevant information (Keasler and McNeil, 2010). Second, buy recommendations are positively associated with short selling (Hobbs, Keasler, and McNeil, 2012). Third, the market reaction is heterogeneous since it depends on whether the recommendation is initial or subsequent, the number of total recommendations on the same Show, and the accuracy of the previous recommendations (Karniouchina, Moore, and Cooney, 2009), Show segment, and the direction of a recommendation (Gutierrez and Stretcher, 2015). Fourth, factor-adjusted returns of a portfolio based on Show recommendations are not significantly different from zero, and the returns behind Cramer's profile are driven by small stocks, growth stocks, and momentum stocks (Bolster, Trahan, and Venkateswaran, 2012). The study closest to ours is by Engelberg, Sasseville, and Williams (2012) who use Nielsen as the media source and find that stock recommendations on the Mad Money Show lead to significant overnight returns and negative return reversals in the following months. They attribute this overnight mispricing to a viewership of high-income viewers. While they use the number of viewers as a passive measure of attention, our attention indexes are able to capture the causal effect of the Show when reflecting the more costly information acquisition by retail and institutional viewers.

Second, our paper contributes to the effect of the media on the stock market. The findings of this literature identify the causal effect 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 their measure of investor attention and trading volume (Cookson and Niessner, 2020). Despite the recent statistics on declining TV viewerships,[3] our paper contributes to the literature by documenting the significant impact of a TV show on the investment behaviors of retail and institutional investors and the subsequent effect on volumes and prices of mentioned stocks.

Third, our research contributes a direct index measure to the literature measuring the 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, Roulstone, and Thornock, 2019), and volume of posts on social media (Cookson and Niessner, 2020) to measure the attention of investors. Close to our research, Liaukonytė and Žaldokas (2021) study the effects of TV advertisements on the information acquisition on SEC EDGAR and the association between the jump in attention after TV advertisements and next-day trading activity. However, while TV advertisements mainly aim to increase product sales, the Mad Money Show includes direct stock recommendations and financial content. Our empirical findings confirm this as the magnitude of the impact of the Mad Money Show on the attention indexes, volumes of trading, and prices of the mentioned stocks are much larger in comparison to those of Liaukonytė and Žaldokas (2021).

Fourth, our research contributes to the literature that uses the dataset of the holding of users of the Robinhood trading platform to examine the behavior of retail investors. The findings of this literature include: herding behavior among Robinhood users where intense buying by Robinhood users in a stock leads to an -4.7% abnormal return in 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 uses 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, 2020); and the hourly turnover of retail investors' holdings of Robinhood being significantly affected by TV advertisements (Liaukonytė and Žaldokas, 2021). We show that recommendations or mentions of a stock on the Mad Money Show can significantly affect the holdings of Robinhood users. Hence, our paper contributes to the literature on the determinants of the portfolio choices of household investors by showing how media and attention-grabbing events affect the investment decision-making of retail investors.

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[3] 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/

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 attention of investors. Section 5 analyzes the impact of the Show on the volume of transactions and holdings of retail investors. Section 6 tests the effect of the Show on abnormal stock returns. Section 7 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 choice decision deals with the elapsed time over which information acquisition should be measured. One possibility is a daily information attention (DIA) period running from 6 pm, the beginning of one Show, to 6 pm, the beginning of the next Show. Another possibility is pre-market investor attention (PMIA) 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. The third possibility is the period of the live Show of 6:00 pm to 8:00 pm to capture the real-time effects of the Show on the informational attention behaviors of viewers. We depict the three measurement periods in Figure 1.

[Insert Figure 1 about here]

The second choice decision is the informational source used in the measurement of the informational attention of investors. Our information attention measures use download queries on SEC EDGAR for all investors and the number of posts published on Stocktwits for retail investors. We focus on 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 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.Arin.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 attention indexes for all (institutional and retail) investors.[4]

We also exclude posts on Stocktwits without 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 attention, we follow Da, Engelberg, and Gao (2011), and Drake, Roulstone, and Thornock (2012) and normalize each index by using the logarithm of the raw index over the logarithm of the median of the raw index on the same weekday during the last 8 weeks.[5]

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 the Mad Money Show 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 their 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 at 1000-5000.[6] 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".[7]

We download the 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 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). Robintrack failed to download the data on August 9, 2018, on January 24 to 29, 2019, and January 7 to 15, 2020, and had 69 outage incidents.[8] Four of those incidents affected retail trading and lasted for at least one trading hour.[9] We select all stocks in the Robintrack database with at least one recommendation or mention on the Show from May 2018 to August 2020.

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[4] The detailed descriptions of the process used to exclude Robots and classify retail and institutional investors are provided in the Internet Appendix A, Table A.2.
[5] In order to avoid excluding observations when the median or number of tweets is equal to 0, we use Ln ((twit+0.1)/(Median of twits over last 8 weeks+0.1)).
[6] https://techcrunch.com/2020/02/20/robinhood-profiles-morgan-stanley-etrade/
[7] https://www.nytimes.com/2020/07/08/technology/robinhood-risky-trading.html
[8] https://status.robinhood.com/history
[9] Times and details of the incidents are provided in Table B.1 in the Internet Appendix B.

3. SAMPLE AND DATA

3.1 Mad Money Show

We extract all stock recommendations on the Mad Money Show on CNBC from May 2006 to December 2020.[10] Figure 2, Panel A, provides information on types of recommendations and segments of the Show. The recommendations range from strong sell to strong buy (Figure 1, Panel A). As reported in Table 1, we have 2968 Shows and 48,335 total recommendations (29% strong buys and only 25.4% negative mentions or sell recommendations).

[Insert Figure 2 and Table 1 about here]

The Show consists of different segments; namely: Discussed stocks, Featured stocks, Guest interviews, Lightning round, and Mailbag. For "Guest interviews" consisting mostly of CEOs or board members and for "Featured stocks", Cramer discusses and shares views about one company. In "Discussed stocks" or "Lightning round", the amount of time allocated to each stock is limited to one sentence or only a suggestion to buy or sell. The number of stock recommendations for each segment is shown in Table 1. The number of stocks in the Guest interview and Featured stocks is 16% of all recommendations, while Discussed stocks, Lightning round and Mailbag stocks include 84% of all observations. While about 2900 unique stocks were mentioned on the Show, some stocks such as Apple (AAPL) or Facebook (FB) are more frequently mentioned. In Table 2, we provide the stocks with the highest number of recommendations on the Show. We sort stocks in our database based on their returns over the last 12 months and compare them with the universe of CRSP stocks (stock with share class equal to 10 and 11). For the stocks in the Guest interview (Featured stock) segment of the Show, 41.81% (39.51%) are in the top quintile of returns over the last 12 months, while 9.21% (8.96) are in the bottom quintile. When stocks are sorted based on the NYSE breakpoints, 24.24% (28.19%) of stocks in Guest interviews (Featured stocks) are in the top quintile in comparison to 11.83% (8.45%) in the bottom quintile. These results suggest that the Show tends to focus on stocks that are bigger and have a superior prior performance which is only partially consistent with the conclusion drawn by Bolster, Trahan, and Venkateswaran (2012).

[Insert Tables 2 about here]

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[10] The stock recommendations of 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 thestreet.com to extend the table of recommendations.

3.2 Other Variables and Summary Statistics

Table 3 provides descriptive statistics of our sample for the variables defined in Internet Appendix A.1. Panel A reports the summary statistics using information drawn from CRSP, Compustat, I/B/E/S and Robintracker.com. Panel B reports summary statistics for the volume of posts on Stocktwits and the number of queries on SEC EDGAR conditioned on the occurence of an earnings announcement (EA). The number of post (queries) on Stocktiwts (SEC EDGAR) for each firm per day increases from 5.15 posts (30.12 queries) on non-earnings announcement dates to 48.08 posts (76.61 queries) on earnings announcements dates.

[Insert Table 3 about here]

4. RESULTS

4.1 Preliminary Results

The initial results regarding the abnormal attention of stocks mentioned on the Show are presented in Figure 3 where day 0 is the day a stock is mentioned on the Show. Abnormal attention is calculated as the logarithm of the number of visits (tweets) to EDGAR (Stocktwits) from 6:00 p.m. (the time of the start of the Show) to 6:00 p.m. on the next day divided by the logarithm of the median number of such visits (Tweets) on the same window of the week over the previous eight weeks. The graphs reveal abnormal jumps in information acquisition and attention from both SEC EDGAR and Stocktwits for mentioned stocks that are consistent for all segments of the Show. In panel A, we observe that any mention of a stock on the Show, regardless of the direction of the recommendation or segment of the Show, leads to abnormal attention for that stock. Since the abnormal attention is measured by the logarithm of the volume of downloads (tweets), the graphs show that the mention of the stock on the Show leads to a 12.71% (62.3%) increase in attention for the stock on EDGAR (Stocktwits). The significant difference between the percent increase in queries on EDGAR and on Stocktwits suggests a contrast in the behaviors of viewers of the Show. While EDGAR is free to access, viewers of the Show, who mostly consist of retail investors, are more likely to use social media to express their opinion. In contrast to queries on EDGAR, posting on social media could also attract the attention of other users beyond those that viewed the Show. When we distinguish between buy and sell recommendations, we find that abnormal attention is almost the same for day 0 and slightly higher for sell recommendations for most days before and after the day of the Show. While more stocks are mentioned in the Lightning round or Discussed stock segments of the Show (84% of the recommendations), the time spent on each stock is limited for these segments of the Show. In contrast, the time and attention allocated to the stocks mentioned in the Features or Guest interview segments of the Show are much higher. These differences are also reflected in Panels

B and C of Figure 3 where there is not only a jump in attention on the day of the Show but also that the increase in the level of attention for stocks mentioned in the Features or Guest interview segments of the Show is significantly higher than for stocks mentioned in other segments of the Show. While there is a 7.3% (39%) increase on average in attention for stocks mentioned in the Lightning round or Discussed stocks segments of the Show on EDGAR (Stocktwits), an interview with the CEO of a firm leads to a 46.9% (340%) increase in the attention devoted to the CEO's firm. While the recommendations of the Show have significant effects on the attention of investors, we find that the magnitudes of the effects are different on Social media and EDGAR. As a benchmark, we show that the abnormal attention around earnings announcements in Panel D. As an important event for firms, the attentions of investors increase on earnings announcement dates by 97% (452%) on EDGAR (Stocktwits). This indicates that an interview with the CEO or CFO of a firm on the Mad Money Show leads to an increase in investor attention of about 51.4% (75.2%) of abnormal attention to EDGAR (Stocktwits) on earnings announcement dates.

[Insert Figure 3 about here]

4.2 Main Results

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

$$DIA_{i,t} = a + \beta_0 \, SHOW_{t-1} + \gamma \, Controls + fixed \, effects + \epsilon_{i,t} \tag{1}$$

The dependent variable is the daily investor attention ($DIA_{i,t}$) to SEC EDGAR ($DIAE_{i,t}$) or Stocktwits ($DIAS_{i,t}$) 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 5. All regressions include firm fixed effects to control for the firm-specific attention effect, day of the week effects to control for the change in the behavior of viewers of the Show during the week, and month and year fixed effects to control for the effect of time-trends. Standard errors are clustered at the firm level.

The regression results are reported in Table 5. In panel A, we focus on the Guest interview segment and find that the effect of this segment of the Show on the attention to the material disclosures of the firm on SEC EDGAR and posts on Stocktwits is significant at the 1% level. The interviews lead to a 27% (169%) increase in queries to SEC EDGAR (number of twits on Stocktwits) compared to the median level over the last eight weeks. The significant differences in the impacts on SEC EDGAR and Stocktwits reflect the behaviors of Show viewers. As expected, viewers are more likely to post about the Show than

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to accessing the financial statements of the company on EDGAR. The effect of the Show on the attention of institutional investors is also significant. While the magnitude of the effect is smaller than the effect on retail investors in column (5), it reflects that the Show also attracts the attention of institutional investors.

To further examine the effects of Guest interviews on the Show, we examine changes in attention on earning announcements dates as being important, value-related information. The average increase in investor searches for financial disclosures on SEC EDGAR is 85.5% and in posts on Stocktwits is 348.1% compared to their medians over the last eight weeks for earnings announcements. Therefore, the magnitude of the increase in the attention of investors to EDGAR (Stocktwits) after an interview by a CEO or CFO of a firm on the Mad Money Show of 27% (169%) is about 31% (48%) of the effect of earnings announcements of about 85.5% (348.1%).

However, there are drawbacks with our daily investor attention measure ($DIA_{i,t}$). There might be confounding events that affect the attention of viewers. Furthermore, non-viewers of the Show might also pay attention to stocks due to abnormal returns or volume. 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 attention from 6:00 pm, the start of the Show, to 8:00 pm, the end of the Show. Since the market is closed and there is no new report on SEC EDGAR after 5:30,[11] we can reasonably attribute the abnormal attention ($2HIA_{i,t}$) during these two hours to the Mad Money Show. We report the results in able B.4 in the Internet Appendix. We find that the effect of Guest interviews is stronger on $2HIA_{i,t}$ 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). However, while the effect on the attention of institutional investors is still significant, it is smaller than the effect on institutional daily attention.

In Panels B and C of Table 5, we report the results for stocks mentioned on different segments of the Show for access to SEC EDGAR and posts on Stocktwits. The effect on the abnormal attention of stocks recommended on the Show is statistically significant at the one % level for the undifferentiated (column 1) and differentiated samples (columns 2 through 8). The effect of buy recommendations (column 2) is stronger than that of sell recommendations (column 3). The effect also differs between the Show segments where the abnormal attention is stronger for Guest interviews and Featured stocks (columns 4,5, and 6) compared to the Discussed and Lightning rounds (columns 7 and 8). This is most likely due to the

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[11] According to the SEC website, filing time for filers is from 6:00 am (ET) to 10:00 pm (ET) Weekday. However, the 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).

differential exposure given to a firm mentioned in each of these Show segments. While the host interviews a CEO or CFO of a firm in greater depth during the Guest interview segment, the host only answers questions from viewers about a firm in one or two sentences in the Lightning round. Overall, our results are consistent with our hypothesis about the significant effect of the Show and the amount of media exposure on the attention of investors.[12]

[Insert Table 5 about here]

5. EFFECT OF THE MAD MONEY SHOW ON TRADED SHARE VOLUME AND RETAIL INVESTOR HOLDINGS

In the last section, we identified the relationship between the Mad Money Show, information acquisition, and the abnormal attention of investors. We now analyze the effect of the Show on the volumes and abnormal returns of the recommended or mentioned stocks for investors.

5.1 Volume

To test the effect of the Show on volumes, we measure daily turnover as the ratio of trading volumes scaled by shares outstanding. Our main independent variable is the Show dummy which equals 1 if a stock was mentioned or recommended on the Show and 0 otherwise. Our model is as follows:

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

We include control variables identified in the descriptor to the associated table, and firm, day of the week, month, and year fixed effects. Standard errors are clustered at the firm level.

The results reported in Table 6 reveal that recommendations or mentions on the Mad Money Show significantly affect the next-day turnover.[13] The results reported in Panel A identify a significant effect of the recommendations or mentions segment of the Show on the next day's turnover. We find that an interview by the CEO or CFO of a firm on the Mad Money Show leads to an increase in turnover by 0.7% on the next day. As a comparison, the average daily turnover in our sample is 1.15% and the average turnover on earnings announcement days increases by 0.9%. Also, Focke, Ruenzi, and Ungeheuer (2020)

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[12] A potential concern might be the higher abnormal attention of investors around earnings announcement dates. We obtain similar baseline findings after we rework our main results after excluding a window from 3 days before to 7 days after earnings announcement dates (see Internet Appendix, Table B.5).

[13] We exclude Mondays from Specifications (3) and (6). While for the other days of the week the windows to measure abnormal attention start from 6:00 pm to 9:00 am (15-hours), the effect of the Shows on Friday would affect the market on the next Monday and the window to measure abnormal attention would be different from other days. The results for Mondays with different specifications are provided in Internet Appendix B, Table B.9.

find that a 1-standard deviation increase in TV advertisements increase turnover by 0.1%. These comparisons support a conclusion that the effect of the Show on the share turnover of the firms from interviews of CEOs or CFOs are meaningful. In columns 3 to 6, we test our hypothesis about the effect of the attention induced by the Show as an important channel for affecting financial market behavior. The interaction terms between abnormal attention and the Show dummy are significant and positive for both SEC EDGAR and StockTwits. In other words, our direct indexes of viewer attention, whether it is accessing a firm's financial disclosures on EDGAR or posting a tweet on Stocktwits, can capture the magnitude of the effect on the turnover of a stock. We also shorten the windows and test the more immediate change in the behavior of viewers on EDGAR and Stocktwits after the Show. As reported in columns (4) and (6), the interactions are significant and positive and the magnitudes of the coefficients indicate that the attention channel effect is concentrated around the Show.

[Insert Table 6 about here]

5.2 Retail Investor Holdings

We now test the effect of the Show on the number of Robinhood users holding the stock. Since the Show airs after the market closes at 6:00 pm, we expect and find a significant jump in the number of Robinhood investors only on the day after the Show day in Figure 4. Consistent with prior evidence that abnormal attention is higher for segments of the Show that devote more time and discussion to a firm, Guest interviews have a much higher impact on the popularity index (PI).[14] While a positive mention or recommendation on the Show leads to an average increase of 1.02% in the PI on the next day, Guest interviews lead to an average increase of 2.09% in the PI.

[Insert Figure 4 about here]

We now estimate regression (3) when our dependent variable is the daily change of the popularity index (PI) for a stock among Robinhood users. We find a highly significant impact of Guest interviews on the next-day popularity index among Robinhood users (Panel A in Table 7). The effect of the Show is still significant at the 1% level with the addition of lagged changes in PI and control variables. The appearance of Guest interviews with the CEO or CFO of a firm on the Mad Money Show increases the popularity index in the next day by 1.6%. In specification (3), we test the effect of the Show with interaction terms to pre-market investor attention on Stocktwits (PMIAS)[15] on the day of the interview.[16] The interaction term

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[14] The popularity index is the number of Robinhood users who hold a particular stock. The data are available from May 2018 to August 2020.

[15] We can only use the data regarding attention to Stocktwits since information regarding queries on SEC EDGAR is only available until July 2017.

[16] We exclude Mondays from Specifications (3) and (4) as explained in footnote 9. The result for Mondays with different specifications are provided in Internet Appendix B.9.

is significant and positive and demonstrates that the abnormal attention induced by the interview is a channel that links the show to the behavior of retail investors. In specification (4), we use abnormal attention for a 2-hours window from the start of each Show and find a significant positive effect. The ratio of the interaction coefficient in column 4 to column (3) is 70% and shows that most of the attention-induced trading is attributable to the jump in the attention during the show.

We also calculate the change in the PI from the market closure to the PI in the next day's market open and the change in the PI during the next day (from open to close). This allows for a test of the effect of the Show on the market open. We find that most of the effect of a Show appearance occurs during the next day. However, the effect of the Guest interview is reversed in the following days and the effect is negative on days 2 through 7 after the Show (see Panel B of Table 7). We test the overall change in the PI over 2 days, 5 days, and 10 days after the Show. We find that while most of the effect occurs during the first day, the overall effect of the interview on PI fades away in 10 days. When we test the effect of different segments of the Show, we find in Panel C of Table 7 that regardless of the direction of recommendations or the time devoted to a particular stock on the Show, the effect of any mentions on the Show significantly increase the holdings of Robinhood users by an average of 0.528%. We also find a stronger effect of positive versus negative recommendations for all segments (column 2 versus column 3), Featured stocks (column 4 versus column 5), and Discussed and Lightning round stocks (column 6 versus column 7).[17]

[Insert Table 7 about here]

6. EFFECT OF THE MAD MONEY SHOW ON ABNORMAL STOCK RETURNS

We now examine the effect of the Show's recommendations/mentions on stock prices. We use the event study approach to calculate the abnormal returns using the five-factor model (Fama and French, 2014) whose factors are market excess return, size, value, profitability, and investment. We estimate beta coefficients over a 200 tradings day estimation window [-230, -30] and use the estimates to calculate the expected return over the event window. Abnormal return ($AR_{i,t}$) is the difference between expected and actual returns. We define cumulative abnormal returns as follows:

$$CAR_{i,t} = \sum_{s}^{t} AR_{i,t}$$

Where $CAR_{i,t}$ is the sum of the abnormal returns over [s,t] for firm i. Day 0 is the date the stock is mentioned or recommended on the Show. Since the Show airs at 6:00 pm, any effect of the Show on

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[17] We also analyze the Show's impact on traded volumes and retail investor's holdings for a window from 3 days before to 7 days after the earnings announcement dates. Results are consistent with the main findings (see Internet Appendix, Table B.10 and B.12).

prices/returns starts on day 1. We exclude events with any recommendations or mentions on the Show in the last 20 days.

We present the results around recommendations and mentions on the Show in Figure 5 and Panel C of Table 3. We observe a similar pattern of an immediate spike and subsequent price reversal for all Show segments. To illustrate, the average CAR is +64 basis points (bp) on the day after a Guest interview on the Show, and reverses in the following days to become -95 bp by day 20. The magnitude of the ACAR to a recommendation in the Lightning/Discussed round is smaller in comparison to the other segments of the Show. This is consistent with our findings in prior sections of heterogeneous effects of different Show segments on the attention of investors and the volume of transactions. We also find that ACAR [-10,-1] is significantly positive (negative) for buy signals in the Featured and Lightning/discussed round. This can be explained by the interest of viewers to ask questions about recent movers and the tendency of Cramer to recommend recent winners/losers. To better understand the mechanism behind the effect of the Show, we categorize the Guest interviews conditioned on the frequency of the appearance of a Guest from the same firm in Figure B.6 in the Internet Appendix.[18] While the effect of the first interview of a firm CEO or CFO is stronger than subsequent interviews, lack of informational content leads to an insignificant ACAR[1,20] in all cases. The effect of an appearance is most likely moderated since the CEOs are legally slanted to using precautionary language that does not reveal nonpublic information in their interviews.

[Insert Figure 5 about here]

We next estimate the following model to examine the effect of the Show on the CARs over different horizons:

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

Where CAR is for a period after a stock that has been mentioned or recommended on the Show. $SHOW_{t-1}$ is a different dummy variable for each segment of the Show. The control variables are as defined in Internet Appendix A.1 and described with the associated results in Table 8 are *Abnormal attention$_t$, Abnormal attention $_t$ * SHOW$_{t-1}$, Market return$_{t-1,t-29}$, VIX, Size, CAR$_{t-10,t-1}$*, and *Retail ownership*. Firm, day of the week, month, and year fixed effects also are included. Standard errors are clustered at the firm level.

The ACAR associated with the Show for the day after the Guest interview (i.e. [1,1]) reported in Panel B of Table 8 is a significant +47 bp. However, the ACAR associated with the Show becomes insignificant over the period [1,20]. The interaction term between abnormal attention and the Guest interview is

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[18] Since the show starts on March 2005 and our database starts on June 2006, we exclude the interviews from 2006 through 2007 from the final results in panel D.

significantly positive for ACAR [1,1]. This suggests that the intensity of the costly acquisition of information by investors can be used as a measure of the perceived benefits of the recommendations on the Show. Panel B of Table 8 reports the results for the CAR for various post-Show periods for the different Show segments conditioned on the amount of time and discussion allocated to a stock. We again find that the ACAR are affected only short-term by the recommendations/mentions on the Show.[19] In contrast, the effect of buy (sell) recommendations on the Discussed/Lightning rounds on ACAR [1,20] are significantly negative (positive) which suggests that these recommendations appear to be potentially useful contrarian signals. Overall, the pattern of an instant AR spike and subsequent dissipation is consistent with the lack of an informational shock associated with the Show, and an temporary increase in price pressure due to increased noise trading and its subsequent dissipation.

[Insert Table 8 about here]

7. CONCLUSION

In this paper, we study the effect of the Mad Money show on the stock market by focusing on attention as a channel for measuring the impact of the Show on the 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 information acquisition and attention 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 attention generated by the Show subsequently increases the turnover in the following days, impacts the portfolio holdings of retail investors, and significantly affects average cumulative abnormal returns (ACARs). However, the effect of the Show on the ACARs is short-term as it either becomes insignificant over the 20 days post-Show or changes sign to become significantly negative (positive) for the buy (sell) recommendations made on the Discussed/Lightning rounds of the Show.

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[19] We provide these results in Table B.13 in the Internet Appendix.

REFERENCES

Barber, B. M., and T. Odean. 2008. All That Glitters: The Effect of Attention and News on the Buying Behavior of Individual and Institutional Investors. *Review of Financial Studies* 21(2): 785–818.

Barber, B. M., T. Odean, and C. Schwarz. 2020. Attention Induced Trading and Returns: Evidence from Robinhood Users. Working Paper. https://blog.robinhood.com/news/2020/5/4/robinhood-raises-280-million-in-series-f-funding-led-by-sequoia (August 30, 2021).

Ben-Rephael, A., Z. Da, and R. D. Israelsen. 2017. It Depends on Where You Search: Institutional Investor Attention and Underreaction to News. *The Review of Financial Studies* 30(9): 3009–47.

Bolster, P., E. Trahan, and A. Venkateswaran. 2012. How Mad Is Mad Money? Jim Cramer as a Stock Picker and Portfolio Manager. *The Journal of Investing* 21(2): 27–39.

Brunner, F., and M. Ungeheuer. 2019. The Power of Prices: Information, Trade, and Salient Returns. Working Paper. https://www.econ.kit.edu/Ungeheuer, Brunner - The Power of Pricing, Information, Trade and Salient Returns.pdf (August 31, 2021).

Chi, S., and D. M. Shanthikumar. 2018. Do Retail Investors Use SEC Filings? Evidence from EDGAR Search. Working Paper. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3281234 (August 27, 2021).

Cookson, J. A, and M. Niessner. 2020. Why Don't We Agree? Evidence from a Social Network of Investors. *The Journal of Finance* 75(1): 173–228.

Da, Z., J. Engelberg, and P. Gao. 2011. In Search of Attention. *The Journal of Finance* LXVI(5): 1461–99.

Drake, M. S., B. A. Johnson, D. T. Roulstone, and J. R. Thornock. 2019. Is There Information Content in Information Acquisition? Working Paper. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3356055 (August 28, 2021).

Drake, M. S., D. T. Roulstone, and J. R. Thornock. 2012. Investor Information Demand: Evidence from Google Searches Around Earnings Announcements. *Journal of Accounting Research* 50(4): 1001–40.

Engelberg, J. E., and C. A. Parsons. 2011. The Causal Impact of Media in Financial Markets. *The Journal of Finance* 66(1): 67–97.

Engelberg, J., C. Sasseville, and J. Williams. 2012. Market Madness? The Case of Mad Money.

Management Science 58(2): 351–64.

Fama, E. F., and K. R. French. 2014. A Five-Factor Asset Pricing Model. *Journal of Financial Economics* 116: 1–22.

Focke, F., S. Ruenzi, and M. Ungeheuer. 2020. Advertising, Attention, and Financial Markets. *The Review of Financial Studies* 33: 4676–4720. https://academic.oup.com/rfs/article/33/10/4676/5658636 (August 27, 2021).

Gutierrez, J., and R. Stretcher. 2015. Mad Money: Does the Combination of Stock Recommendation and Show Segment Matter? *Journal of Behavioral and Experimental Finance* 6: 80–92.

Hobbs, J., T. R. Keasler, and C. R. McNeil. 2012. Short Selling Behavior and Mad Money. *Financial Review* 47(1): 65–89.

Karniouchina, E. V., W. L. Moore, and K. J. Cooney. 2009. Impact of Mad Money Stock Recommendations: Merging Financial and Marketing Perspectives. *Journal of Marketing* 73(6): 244–66.

Keasler, T. R., and C. R. McNeil. 2010. Mad Money Stock Recommendations: Market Reaction and Performance. *Journal of Economics and Finance* 34(1): 1–22.

Kumar, A., S. Ruenzi, and M. Ungeheuer. 2021. Daily Winners and Losers. Working Paper. https://ssrn.com/abstract=2931545 (August 27, 2021).

Li, F. W., and C. Sun. 2019. Information Acquisition and Expected Returns: Evidence from EDGAR Search Traffic. Working Paper. https://ssrn.com/abstract=3031977 (August 27, 2021).

Liang, B. 1999. Price Pressure: Evidence from the "Dartboard" Column. *Journal of Business* 72(1): 119–34.

Liaukonytė, J., and A. Žaldokas. 2021. Background Noise? TV Advertising Affects Real-Time Investor Behavior. *Management Science.* In Press.

Merton, R. C. 1987. A Simple Model of Capital Market Equilibrium with Incomplete Information. *The Journal of Finance* 42(3): 483–510.

Moss, A, J. P. Naughton, and C Wang. 2020. The Irrelevance of ESG Disclosure to Retail Investors: Evidence from Robinhood. Working Paper. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3604847 (August 27, 2021).

Neumann, J. J., and P. M. Kenny. 2007. Does Mad Money Make the Market Go Mad? *Quarterly Review*

of Economics and Finance 47(5): 602–15.

Nguyen, B. D. 2015. Is More News Good News? Media Coverage of CEOs, Firm Value, and Rent Extraction. *The Quarterly Journal of Finance* 5(4): 1550017. (No page numbers).

Peress, J. 2014. The Media and the Diffusion of Information in Financial Markets: Evidence from Newspaper Strikes. *The Journal of Finance* 69(5): 2007–43.

Ryans, J. P. 2017. Using the EDGAR Log File Data Set. Working Paper. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2913612 (August 27, 2021).

Welch, I. 2020. The Wisdom of the Robinhood Crowd. Working Paper. https://www.nber.org/papers/w27866 (August 27, 2021).

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

We show the market open and close and the timing of the Show in Panel A, the period for measuring daily abnormal attention (DIA) 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 attention (pre-MIA) running from the start of the Show (6:00 pm) until the market open on the next day (9:00 a.m.) in panel C, and the period to measure abnormal attention of the 2-hours from the start of the Mad Money Show (from 6:00 pm to 8:00 p.m.) in Panel D.

Panel A: Timeline of the Show and the Stock market
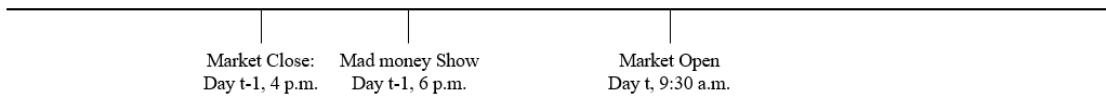
Panel B: Timeline of the daily abnormal attention (DIA) index from 6 p.m. to 6 p.m.
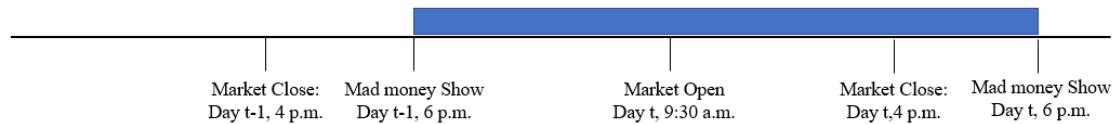
Panel C: Timeline of pre-market abnormal attention (pre-MIA) index from 6 p.m. to 9 a.m.

Panel D: Timeline of 2-hours abnormal attention (2HIA) index from 6 p.m. to 8 p.m.
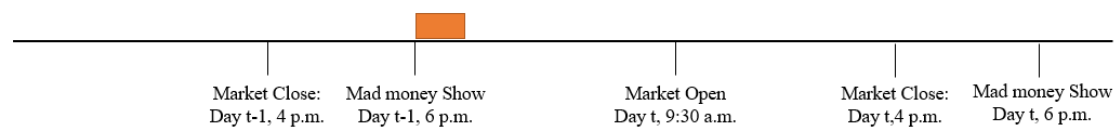
Figure 2: Sample of recommendations on the Show

This figures 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 on the Show on April 24, 2017 are 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

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	L	▼	$46.44	add
Abbott Laboratories (ABT)	04/24	L	▲	$44.13	add
Alaska Air Group (ALK)	04/24	L	▲	$90.68	add
Berkshire Hathaway (BRK.B)	04/24	L	▲	$165.78	add
Cara Therapeutics (CARA)	04/24	L	▲	$16.61	add
Chesapeake Energy (CHK)	04/24	L	▼	$5.38	add
CSX (CSX)	04/24	D	▲	$50.13	add
Delta Air Lines (DAL)	04/24	L	▲	$46.81	add
Hasbro (HAS)	04/24	I	▲	$101.70	add
Honeywell (HON)	04/24	D	▲	$129.79	add

Figure 3: Average abnormal attention to SEC EDGAR and Stocktwits for stocks mentioned on the Show

Daily abnormal attention (DAI) is calculated by the logarithm of the number of queries (tweets) on SEC EDGAR (Stocktwits) regarding a firm mentioned on the Show from 6:00 pm on the Show day to 6:00 pm on the next day divided by the logarithm of the median number of queries (tweets) on SEC EDGAR (Stocktwits) for the same measure for that stock on the same weekday during the past eight weeks. Day 0 is the day the stock is mentioned on the Show. The data from EDGAR and Stocktwits is from January 2010 to July 2017.

Panel A: Average abnormal attention for stocks mentioned on the Show regardless of the segment and recommendation type.
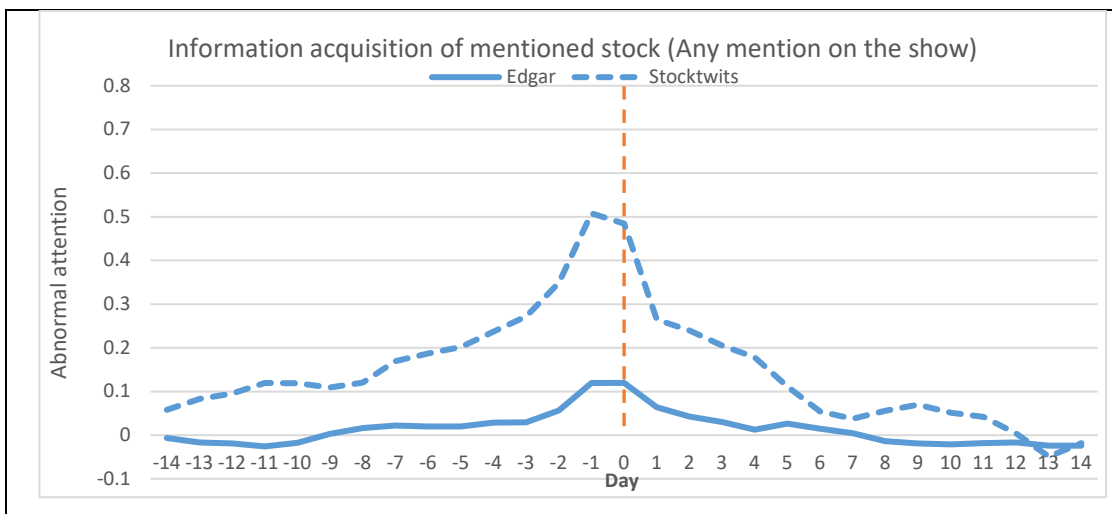
Panel B: Average abnormal attention for stocks that are Featured or are mentioned in the Guest interview (EDGAR)
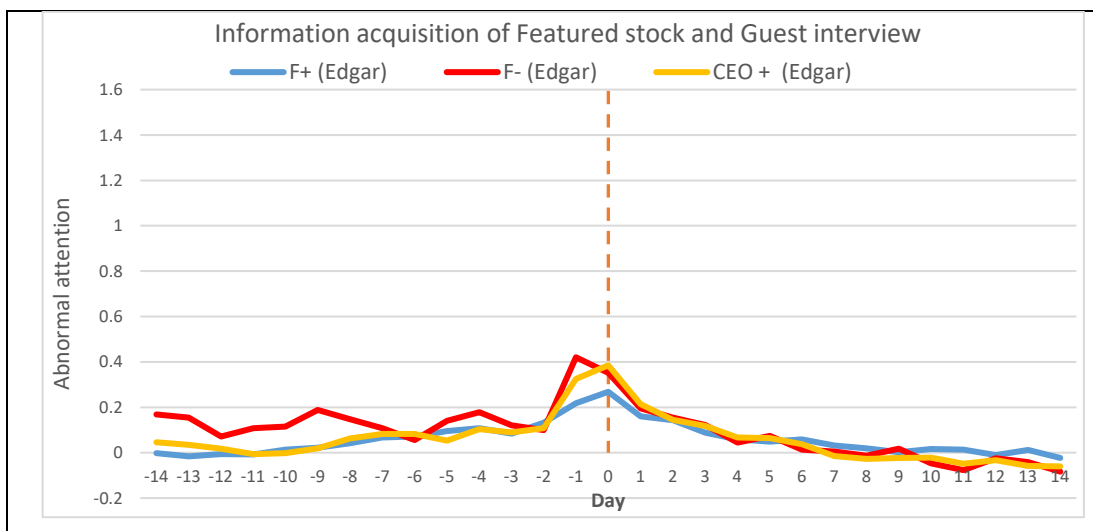
Panel C: Average abnormal attention for stocks that are Featured or are mentioned in the Guest interview (Stocktwits)
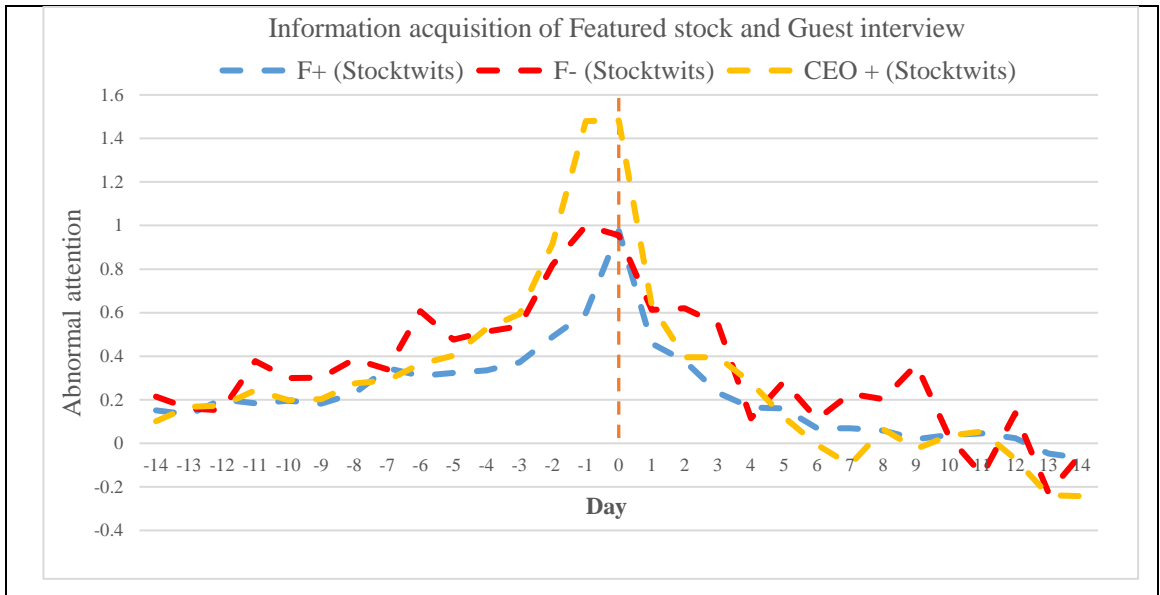
Panel D: Average abnormal attention for stocks around earnings announcements
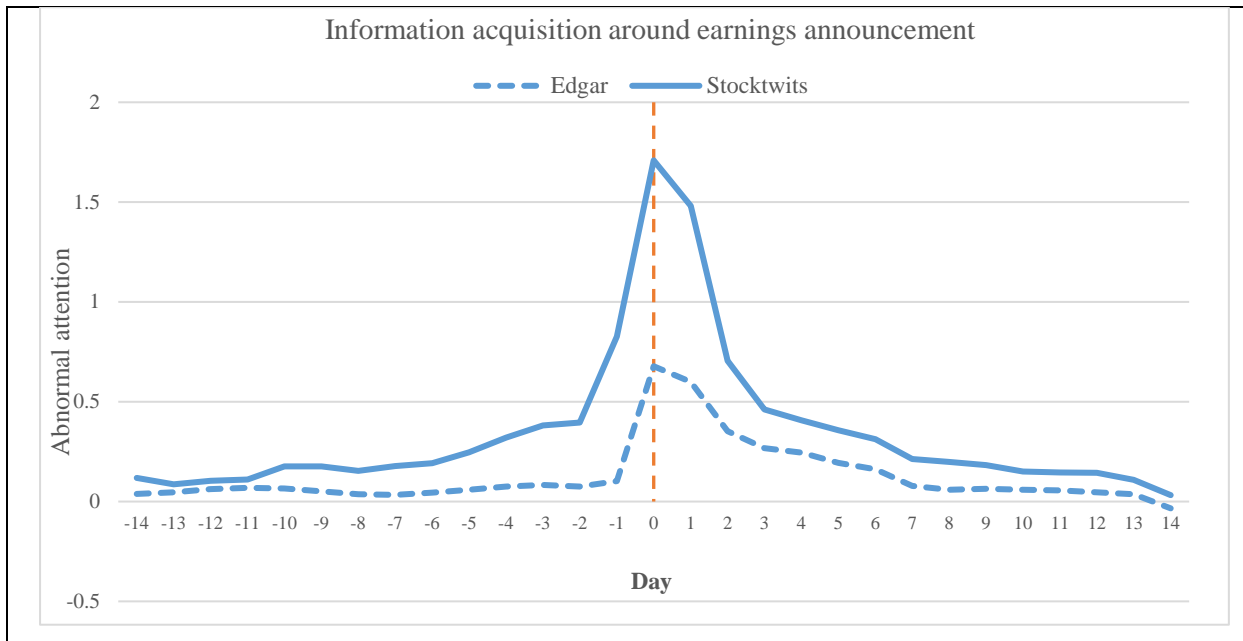
Figure 4: Average percentage change in Robinhood PI for Guest interviews on the Show

Robinhood popularity index (PI) is the number of Robinhood 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.
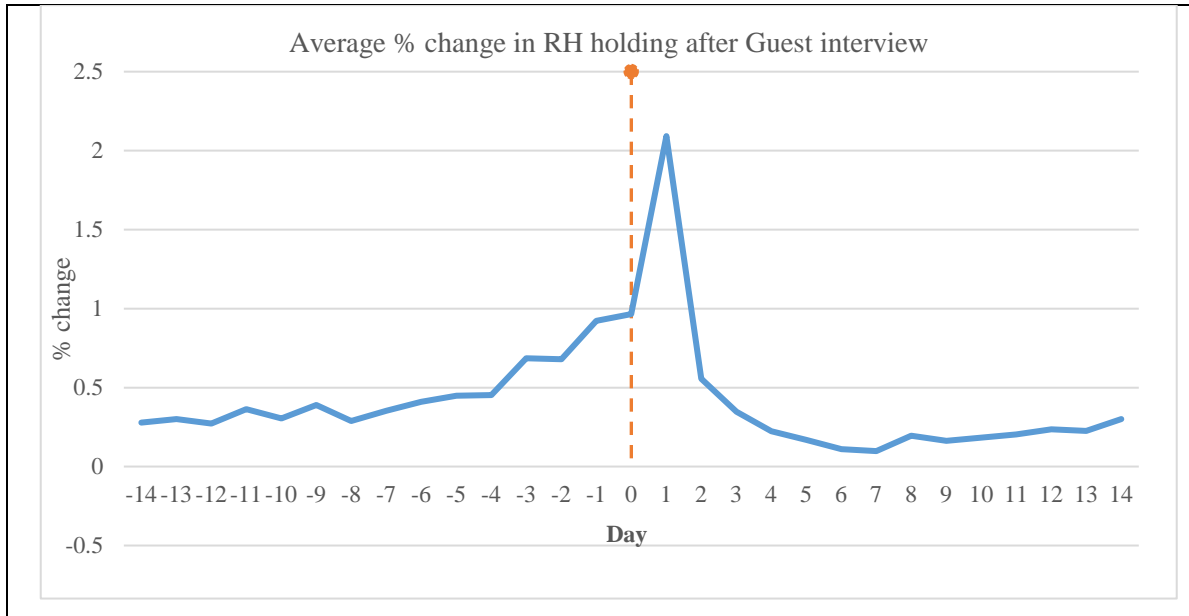
Figure 5: Average cumulative abnormal returns of recommended/mentioned stocks on the Mad Money Show

The following graphs show average cumulative abnormal returns (ACAR) around the Mad Money Show. We calculate the abnormal return using the Fama-French five-factor model for each firm mention. The beta coefficients, which are estimated over a 200 trading-day estimation window [-230, -30], are used in calculating the expected returns over the window [-10, 20]. Abnormal return $(AR_{i,t})$ is the difference between expected and actual returns. We define cumulative abnormal returns for firm i as: $CAR_{i,t} = \sum_s^t AR_{i,t}$, where $CAR_{i,t}$ is the sum of the abnormal returns over [s,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 can first affect the price on day 1. The ACAR around Guest interviews (Interview), and buy (F+) and sell (F-) recommendations in the Featured stocks segment are depicted in this figure.
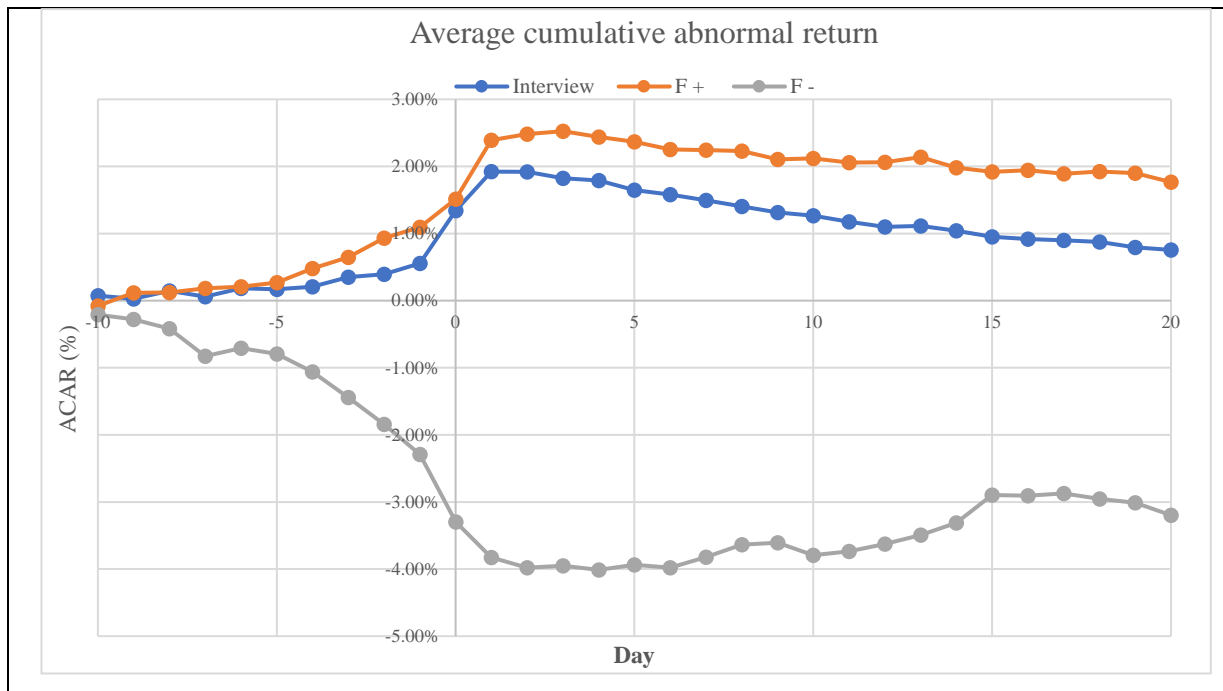
Table 1: Frequency of different recommendations by Show segments

This table reports the frequency of mentioned/recommended stock on the Mad Money Show based on the segment of the Show and the direction of a recommendation.

	Recommendations					Total	Percentage
	Sell recomm	Negative mention	Hold / Neutral	Positive mention	Buy recomm		
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%

Table 2: Stocks with highest mentions on the Show

This table reports the list of top-20 stocks sorted 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 3: Summary statistics

This table reports summary statistics for the variables used in this paper. All variables are defined in Internet Appendix A.1. Summary statistics are reported for all firms in Panel A, and for the number of posts on Stocktwits and queries on SEC EDGAR conditioned on the occurrence of earnings announcements (EAs) in Panel B. The average cumulative abnormal returns (ACAR) for different horizons after a recommendation or mention on the Mad Money Show are reported in Panel C. Day 0 is the date the stock is mentioned or recommended on the Show. Since the Show airs at 6:00 pm, any market effects of the Show are expected to start to occur on day 1. We exclude events with any recommendations or mentions on the Show in the previous 20 days. N is number of observations. Cross-sectional t-statistics are reported in parentheses. Significance at the 1%, 5%, and 10% level is indicated by ***,**, and *, respectively.

Panel A:

Variable	N	Mean	Std Dev	Minimum	Maximum
Abnormal 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

Panel B: Stocktwits and SEC EDGAR

Variable	N	Mean	Std Dev	Minimum	Maximum
Number of post on stocktwits: Non-earnings announcement	11,932,839	5.154	68.248	0	25067
Number of post on stocktwits: Earnings announcement	91,446	48.089	257.839	0	15215
Number of queries on EDGAR: Non-earnings announcement	12,886,804	30.125	114.658	0	79277
Number of queries on EDGAR: Earnings announcement	9,4376	76.614	406.777	0	79156

Panel C: Average cumulative abnormal return (ACAR)

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

Table 4: Correlations among the variables

This table presents the correlations between the variables. All variables are defined in Internet Appendix A.1.

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

Table 5: The effect on abnormal attention of a stock being mentioned on the Show

This table reports the impacts on investor attention from a firm being mentioned on the show, Mad Money. The dependent variable is Daily abnormal attention ($DAI_{i,t}$), which is the abnormal attention based on accesses of the files available on SEC EDGAR or the number of posts on Stocktwits related to firm i on day t. The window to measure $DAI_{i,t}$ 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 number of queries on SEC EDGAR (posts on StockTwits) regarding a firm over the logarithm of the median of the 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 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 with the CEO or CFO of stock i on day t and is equal to 0 otherwise. We count 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 $DAI_{i,t}$. 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. $Market\ return$ 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 if the day is the day of the earnings announcement of 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 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. 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 attention to the Guest interviews

	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***	0.304***	0.236***	0.276***	0.312***	1.272**	1.017***	0.991***
	(17.04)	(14.97)	(11.03)	(5.85)	(11.15)	(25.98)	(25.42)	(22.09)
$Abnormal\ attention_t$		0.273***	0.327***	0.148***	0.224***		0.210***	0.206***
		(121.11)	(102.94)	(96.23)	(115.94)		(117.90)	(111.87)
VIX_{t-1}			-0.001***	-0.001	-0.001			-0.005***
			(-10.23)	(-1.51)	(-3.02)			(-23.78)
$Market\ return_{t-29,t-1}$			1.021***	-0.611***	-1.191***			0.398***
			(-60.78)	(-19.63)	(-49.28)			(9.91)
$Analyst$			-0.013***	-0.068***	-0.022***			-0.081***
			(-9.75)	(-14.04)	(-9.29)			(-16.57)
EA			0.517***	0.633***	0.676***			2.450***
			(66.98)	(45.24)	(67.08)			(146.5)
$Retail\ ownership$			0.021***	0.013	0.050***			0.029***
			(5.14)	(1.17)	(8.09)			(2.58)
$Return_{t-1}$			1.288***	1.671***	1.638***			0.577***
			(8.48)	(6.96)	(8.05)			(8.88)
$Ln\ (Market\ Cap_{t-1})$			0.012***	-0.041***	0.014***			-0.002
			(20.1)	(-20.18)	(13.69)			(-1.47)
$Ln\ (Turnover_{t-1,t-29})$			0.035***	0.020***	0.041***			0.089***
			(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	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 attention to EDGAR based on the segment of the Show (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 attention to Stocktwits based on the segment of the Show (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)
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 6: 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 and B, $SHOW_t$ is a dummy variable equal to 1 if there was a Guest interview with the CEO or CFO of stock *i* on day *t* and is equal to 0 otherwise. In Panel A, *Abnormal attention* in columns (3) and (5) are pre-market investor attention (PMIA) to EDGAR from 6:00 pm (start of the Show) to 9:00 am (Market open) on the next day. The *Abnormal attention* in Columns (4) and (6) are pre-market investor attention (PMIA) to Stocktwits during the Show from 6:00 pm to 8:00 pm (2-hours window). The data in columns (1) and (2) are from 2006 to 2020. Due to the availability of the 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 on day=2 (column 1) to day=7 (column 6) after the Show. In Panel C, we use all recommendations 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). All regressions include firm, week, month, and year fixed effects. 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: The effect of Guest interviews on Turnover

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

Panel B: The effect of Guest interviews on subsequent Turnover (N = 11,529,777)

	Day+2	Day+3	Day+4	Day+5	Day+6	Day+7
	(1)	(2)	(3)	(4)	(5)	(6)
$Guest\ interview_{t-1}$	0.0028***	0.0019***	0.0018***	0.0023***	0.0020***	0.0019***
	(5.31)	(5.44)	(3.65	(5.10)	(4.68)	(4.64)
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
R-squared	0.499	0.499	0.499	0.499	0.499	0.499

Panel C: 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)
$SHOW_{t-1}$	0.006***	0.005***	0.009***	0.008***	0.012***	0.004***	0.009***
	(15.64)	(11.98)	(21.19)	(11.61)	(11.2)	(10.28)	(21.07)
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	0.518	0.518	0.518	0.518	0.518	0.518	0.518

Table 7: 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 if there was a Guest interview with the CEO or CFO of stock *i* on day *t* and is equal to 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 attention* in column (3) (column 4) is pre-market investor attention (PMIA) to Stocktwits from 6:00 pm to 9:00 am on the next day (6:00 pm to 8:00 pm). In Panel B, the effect 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 C, we use all recommendations 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). All regressions include firm, week, month, and year fixed effects. 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: % Change in PI on the next day after a Guest interview

		Close-Close			Close-Open	Open-Close
	(1)	(2)	(3)	(4)	(5)	(6)
$SHOW_{t-1}$	1.878***	1.600***	1.181***	1.145***	0.542***	0.839***
	(13.04)	(11.08)	(7.21)	(6.52)	(11.55)	(8.41)
$Abnormal\ attention_t$			0.271***	0.191***		
			(3.02)	(3.2)		
$Abnormal\ attention_t$ * $Show_{t-1}$			0.037***	0.032***		
			(23.92)	(19.96)		
$\%Change_{t-1}$		0.268***	0.251***	0.252***	0.076***	0.174***
		(39.03)	(37.15)	(37.29)	(35.63)	(34.47)
$Size$		0.002	0.004	0.003	-0.003**	0.008***
		(0.65)	(1.12)	(0.9)	(-2.18)	(2.73)
$Return_{t-29,t-1}$		-0.269***	-0.299***	-0.295***	-0.070***	-0.218***
		(-7.34)	((-8.46))	(-8.33)	(-6.31)	(-7.51)
$Analyst$		0.0006	0.005	0.003	-0.003	0.005
		(0.07)	(0.65)	(0.4)	(-1.16)	(0.68)
$Earning\ announcement_t$		1.497***	1.368***	1.425***	0.098***	1.307***
		(28.94)	(25.98)	(27.2)	(9.73)	(30.65)
$Earning\ announcement_{t-1}$		-0.342***	-0.404***	-0.386***	-0.192***	-0.172***
		(-9.62)	(-10.94)	(-10.49)	(-16.2)	(-5.95)
$Earning\ announcement_{t-2,t-7}$		-0.200***	-0.219***	-0.211***	-0.034***	-0.166***
		(-22.69)	(-22.79)	(-22.18)	(12.54)	(-21.44)
$Retail\ ownership$		0.096***	0.083***	0.089***	0.031	0.067***
		(5.51)	(5.03)	(5.32)	(4.92)	(4.99)
$Return_{t-1}$		2.732***	1.807***	1.826***	1.273***	1.228***
		(26.18)	(16.54)	(16.71)	(32.56)	(15.07)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Number of Obs.	587630	587630	474573	474573	587630	587630
R-squared	0.05	0.152	0.147	0.147	0.103	0.115

Panel B: % Changes in PI after the Guest interview (N = 587630)

	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***	-0.010	-0.063	-0.061	-0.101***	-0.119***	1.707***	1.273***	0.201
	(-3.59)	(-0.19)	(-1.16)	(-1.19)	(-2.38)	(-3.02)	(7.74)	(3.35)	(0.39)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.149	0.149	0.149	0.149	0.149	0.149	0.148	0.172	0.172

Panel C: % Change in PI (N = 587630)

	Anysection	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
SHOW	0.528***	0.654***	0.173***	1.205***	-0.022	0.486***	0.185***
	(15.27)	(14.12)	(4.53)	(7.09)	(-0.11)	(12.88)	(4.73)
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	0.150	0.150	0.150	0.149	0.149	0.149	0.149

Table 8: Cumulative abnormal returns for stocks recommended/mentioned on the Mad Money Show

This table reports the result for the dependent variable, *cumulative abnormal return* (*CAR*), after a firm is mentioned/recommended on the Show, Mad Money. *CARs* 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. The *Cumulative abnormal return* is given by: $CAR_{i,t} = \sum_{s}^{t} AR_{i,t}$, where $CAR_{i,t}$ is the sum of the daily abnormal returns over [s,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 can first affect firm price on day 1. In Panel A, $SHOW_t$ is a dummy variable equal to 1 if there was a Guest interview with the CEO or CFO of stock *i* on day *t* and is equal to 0 otherwise. The *Abnormal attention* in columns (4) to (6) (column (7) to (9)) is pre-market investor attention (PMIA) to SEC EDGAR (Stocktwits) from 6:00 pm to 9:00 am on the next day. VIX_{t-1} is a 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. $Market\ Cap_{t-1}$ is the logarithm of a firm's market capitalization. *CAR* $_{t-10,t-1}$ is Cumulative abnormal return from *t*-10 to *t*-1. In Panel B, the dependent variable is *CAR[1,1]* and 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. All regressions include firm, week, month, and year fixed effects. 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: CAR [1,t] after a Guest interview on the Mad Money Show

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

Panel B: CAR[1,1] for different Show segments

	Pos	Neg	F+	F-	D&LR+	D&LR-
	(1)	(2)	(3)	(4)	(5)	(6)
$SHOW$	0.0038***	-0.0039***	0.0048***	-0.0049***	0.0007**	-0.0037***
	(10.22)	(-10.2)	(6.93)	(-3.18)	(2.33)	(-9.49)
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	0.013	0.012	0.008	0.007	0.006	0.012

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

Internet Appendix (IA)

This online supplementary appendix provides results that are referred to in the main text of this paper.

Appendix A: Variable Definitions, Classifying IP queries, and Show's Heterogenous Effects

Table A.1 Variable Definitions

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)
Market return	Holding-period return of each Stock Market Index (NYSE/AMEX/NASDAQ/ARCA) over the past month.	CRSP
Analyst	Number of analysts following the firm plus one.	I/B/E/S
Earnings date	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
$DIA_{i,t}$	Daily information attention: Measure using SEC EDGAR or Stocktwits based on the period from 6 pm beginning of one Show to the 6 pm beginning of the next Show.	SEC EDGAR and Stocktwits
$PMIA_{i,t}$	Pre-market investor attention using SEC EDGAR or Stocktwits based on the period from 6 pm beginning of one Show to 9 am on the next day.	SEC EDGAR and Stocktwits

Table A.2: Classifying IP queries on SEC EDGAR Log File

1)   Identifying Non-robot IPs:

We download the data from the SEC Edgar website[20] 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). 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.

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

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[20] Link: https://www.sec.gov/dera/data/edgar-log-file-data-set.html

investors. Table B2, panel 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.[21] While we do not claim that our database is complete[22] since investors can access financial information through other providers such as Bloomberg or FactSet, our abnormal 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.

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[21] 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.

Table A.3: 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 attention of investors. First, we test the conjecture dealing with the effect of the information environment of a firm on the relationship between the Show and the attention of investors. We conjecture that the effects of the Show are stronger for the following four firm characteristics: 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 attention of viewers is smaller for a firm with prior recommendations on the Show during the last 7 or 30 days.

Our second group of conjectures is based on the factors that affect the overall attention of viewers of the Show. We posit that the impact of the Show on the attention indexes is weaker on Fridays, during the financial crisis, and when the number of recommendations or interviews is higher, and that the impact of the Show is stronger when the stock market return is at an extreme.[23] 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 the Show on Fridays, during the financial crisis, and on dates when the market return is at an extreme. We also use the number of recommendations or interviews on the Show.

We use the following regression to test the conjecture for each of the four characteristics:

$$Abnormal\ attention_{i,t} = a + \beta_0\ SHOW_t + \beta_1\ DumVar + \beta_2\ DumVar * SHOW_t + \gamma\ Controls +$$
$$fixed\ effects + \epsilon_{i,t} \tag{1}$$

Where all the terms are as previously defined in the main paper. Our primary interest is the interaction term between *DumVar* and *SHOW*. The results are reported in Table B.7.

In Panel A of Table B.7, we use the abnormal 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 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 attention of investors for firms with low turnover or have had more interviews.

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[23] 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 return.

Appendix B: Figures and Numerical Tables

Figure B.1: 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 viewer's 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."

Panel B: **A Transcript of a CEO Interview on the Mad Money Show**

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 B.2: 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.

Monthly Volume of Posts on Stocktwits
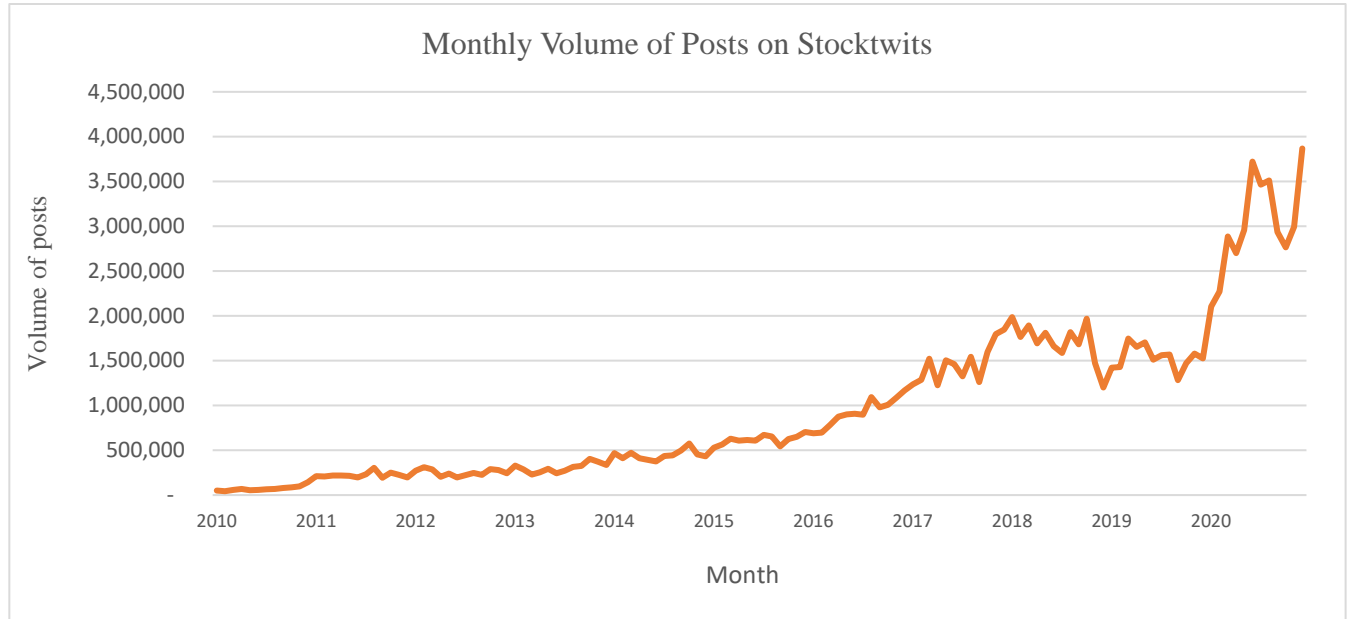
Figure B.3: Average abnormal attention to SEC EDGAR and Stocktwits for stocks mentioned on the Show

Abnormal attention is calculated by the logarithm of the number of queries (tweets) on SEC EDGAR (Stocktwits) regarding a firm mentioned on the Show divided by the logarithm of the median number of queries (tweets) on SEC EDGAR (Stocktwits) for that stock on the same weekday during the past eight weeks. Day 0 is the day the stock is mentioned on the Show. The information from Edgar is from June 2006 to July 2017 (the latest date available) and Stocktwits from 2010 until 2021.

Panel A: Average abnormal attention for a stock mentioned on the Show regardless of the segment and recommendation type

Information acquisition of mentioned stock (Any mention on the show)
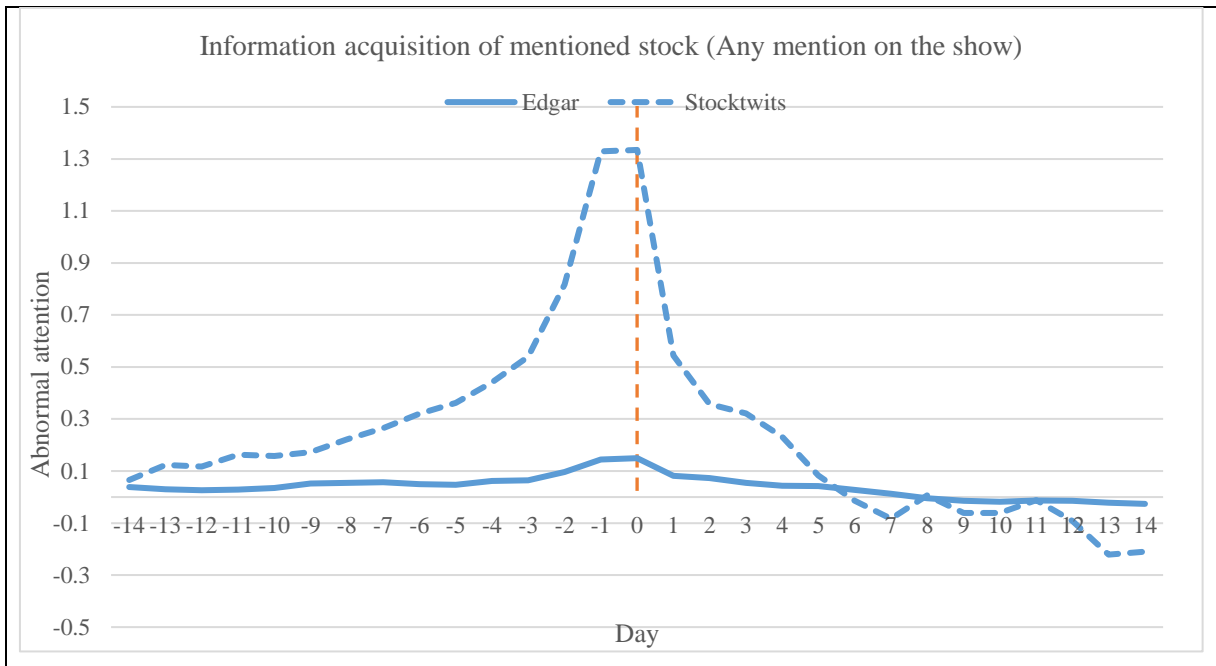
Panel B: Average abnormal attention for buy and for sell recommendations
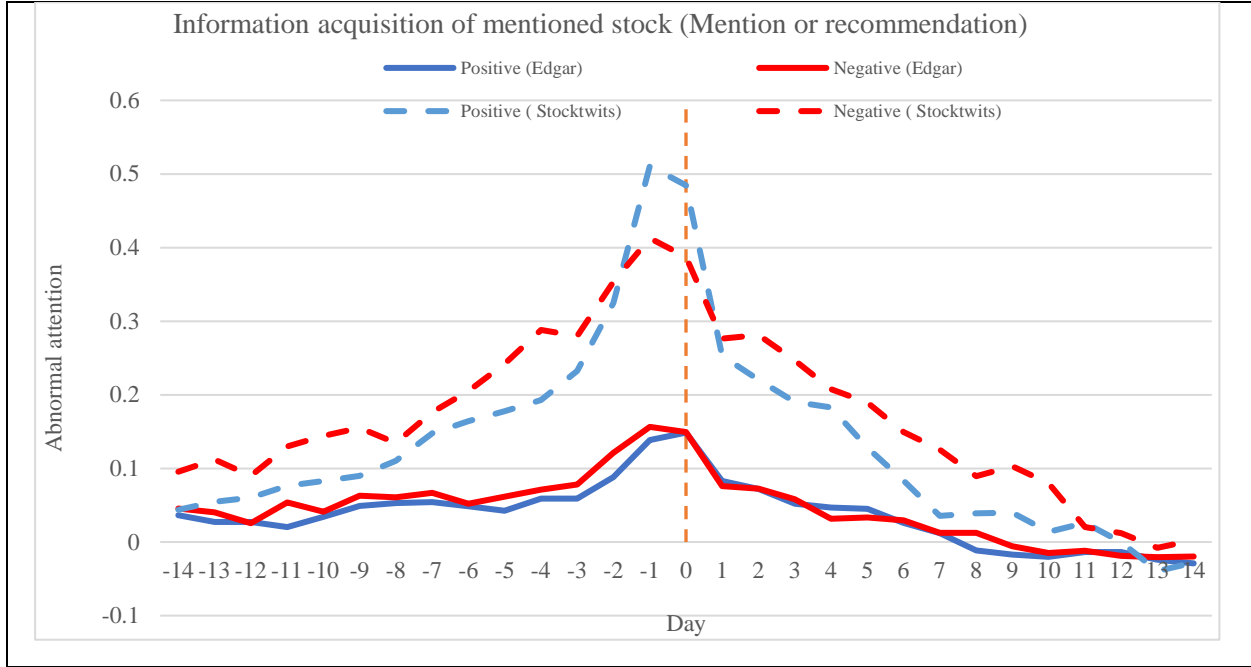
Panel C: Average abnormal attention to Edgar for stocks that are featured or mentioned in the Guest interview.
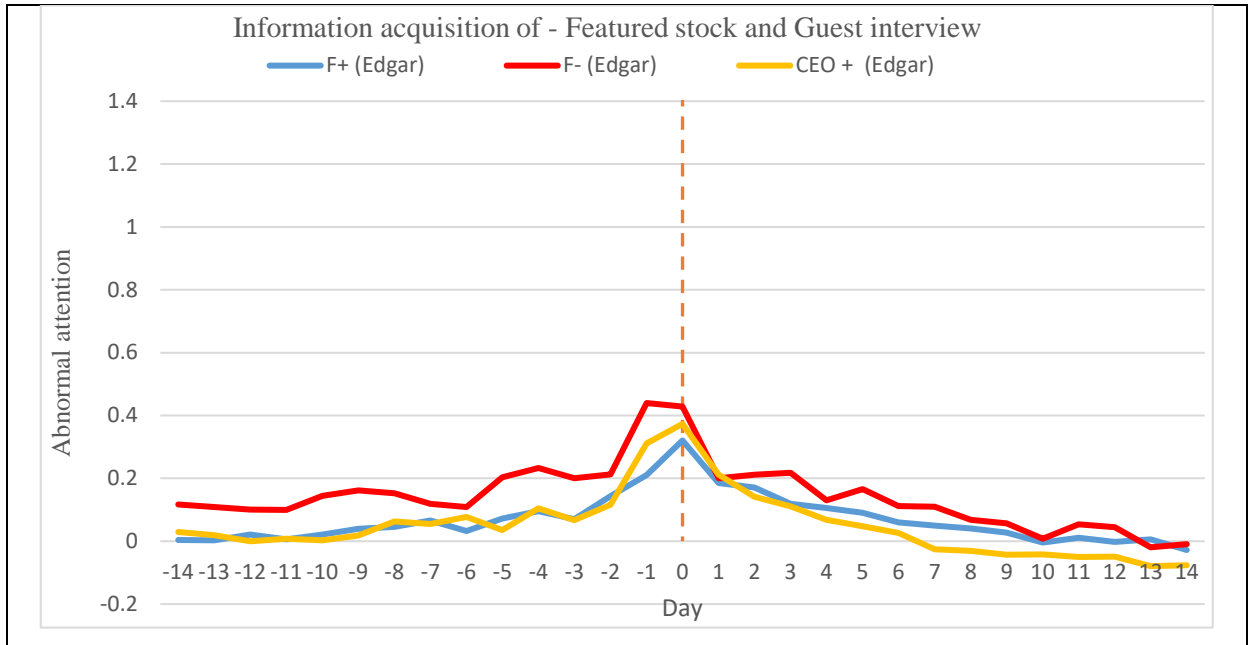
Panel D: Average abnormal attention to Stocktwits for stocks that are featured or mentioned in Guest interviews
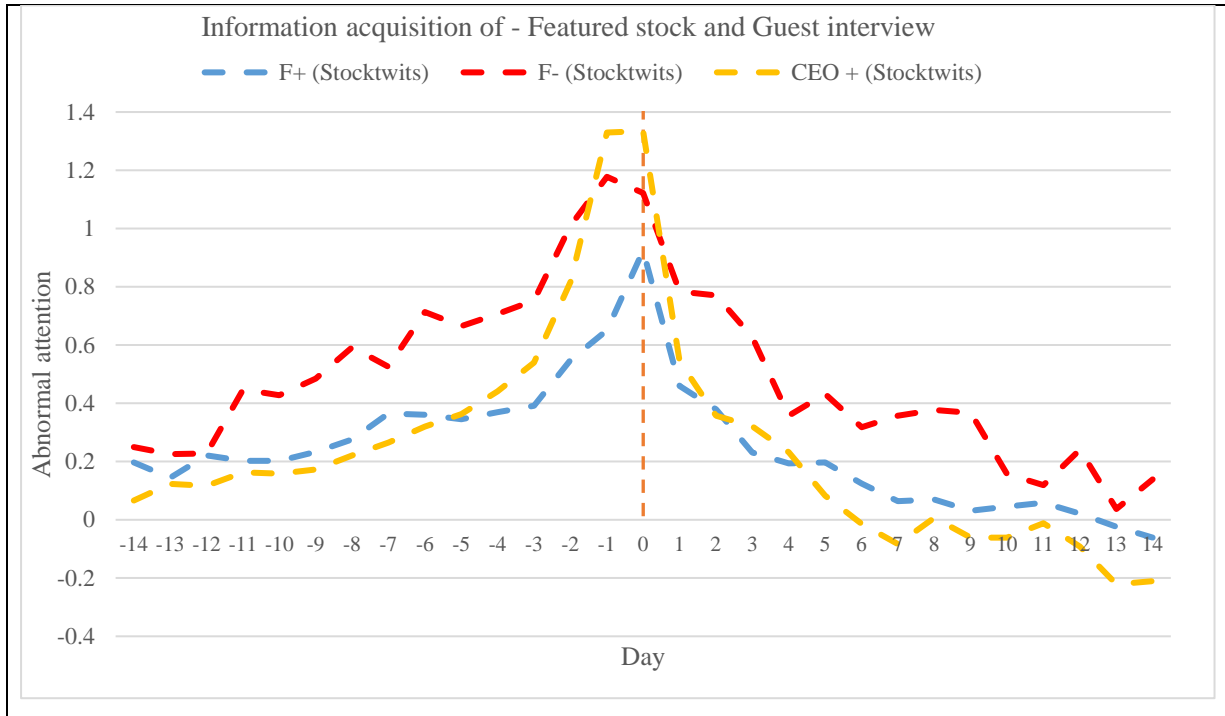
Panel E: Average abnormal attention for stocks mentioned in the featured Lightning round and Discussed segments of the Show
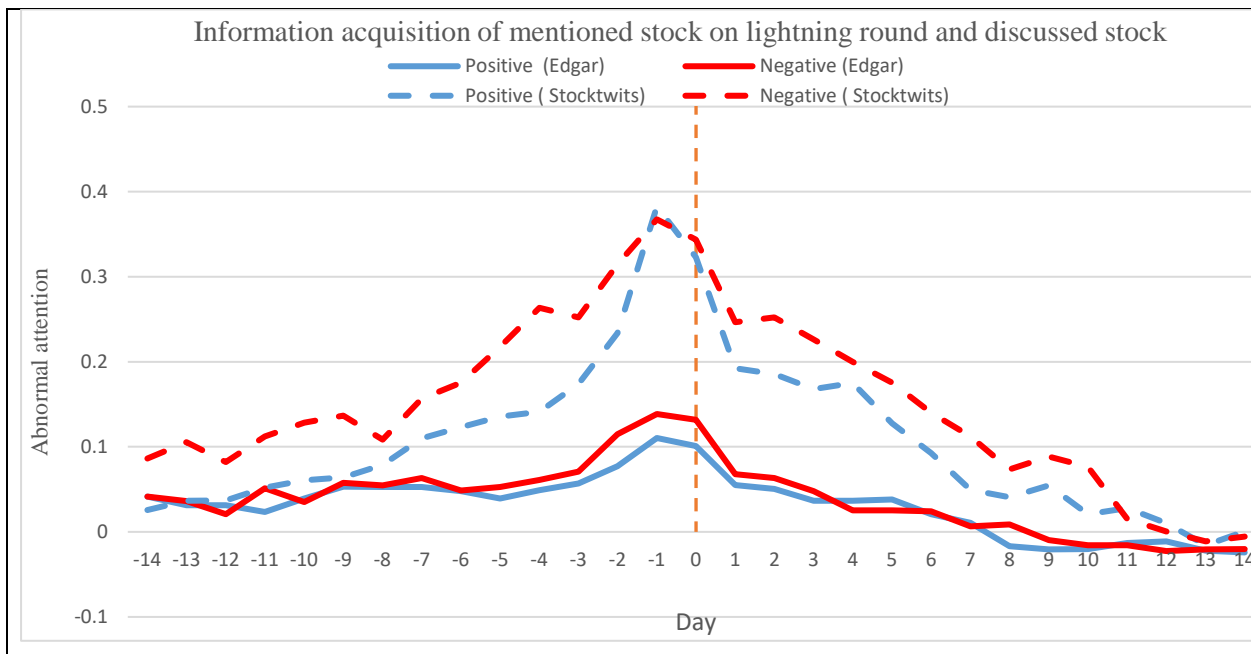
Figure B.4: Statistics of recommendations/mentions on the Show

Panel A: Total number of recommendations/mentions on the Show annually and bullishness (Number of buy recommendations/mentions to All recommendations) on the Show
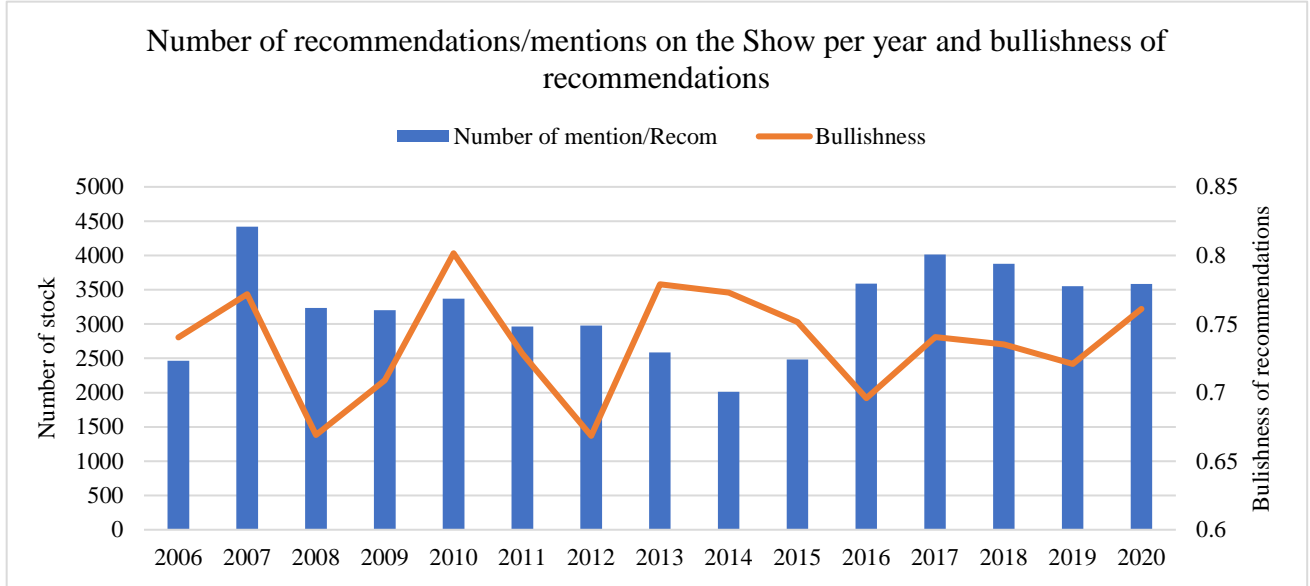
Panel B: Number of recommendations/mentions for each segment of the Show annually
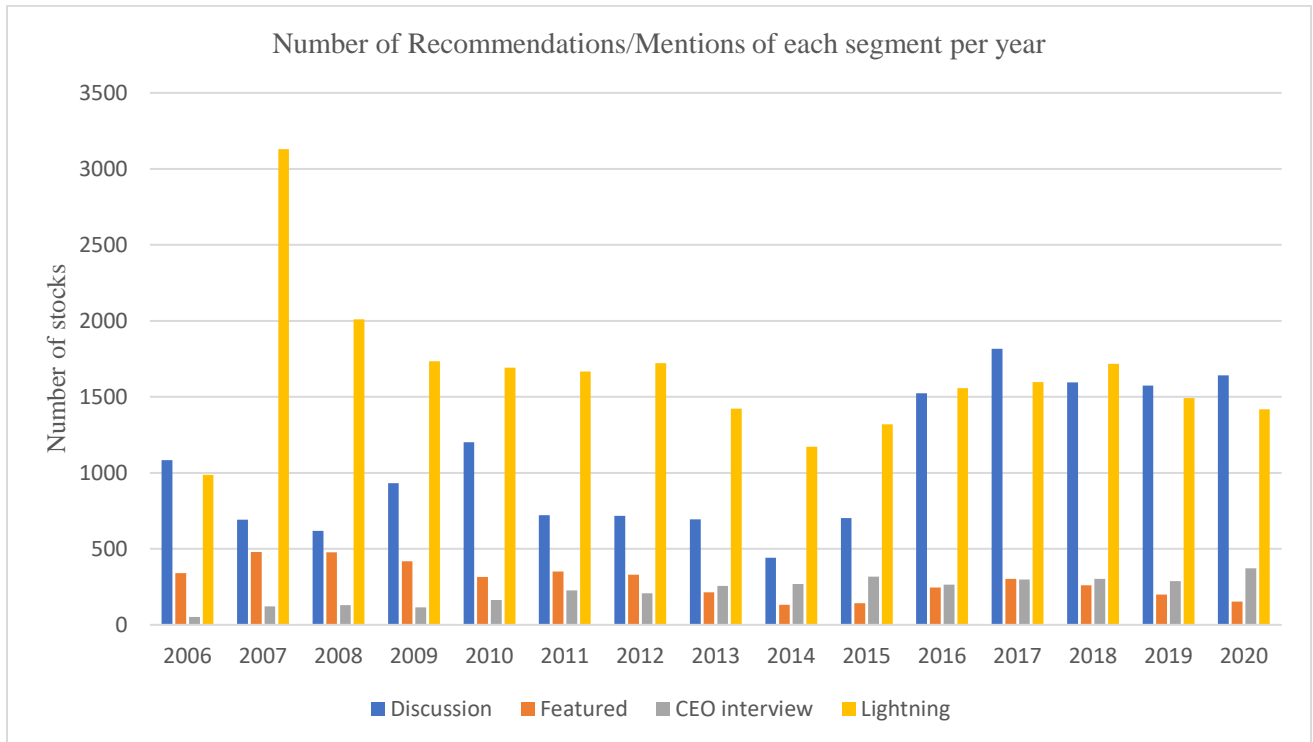
Figure B.5: Average hourly change in popularity index (PI) for Robinhood users

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).
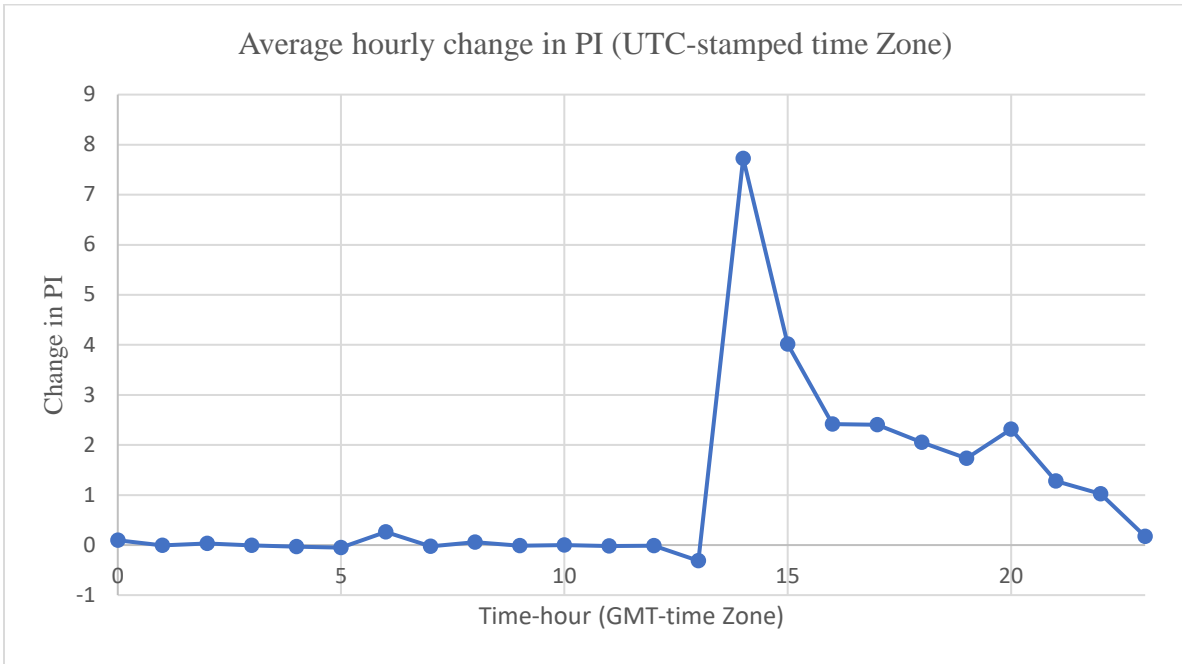
Average hourly change in PI (UTC-stamped time Zone)

This figure depicts the average cumulative abnormal returns (ACAR) around a Mad Money Show on the frequency of Guest interviews for the same firm. We calculate the abnormal returns (ARs) 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 the event window. Abnormal return ($AR_{i,t}$) is the difference between expected and actual returns. CAR for firm i over period [s,t] are given by: $CAR_{i,t} = \sum_s^t AR_{i,t}$. Day 0 is the date the stock is mentioned or recommended on the Show. Since the Show airs at 6:00 pm, the Show is expected to first affect prices on day 1.
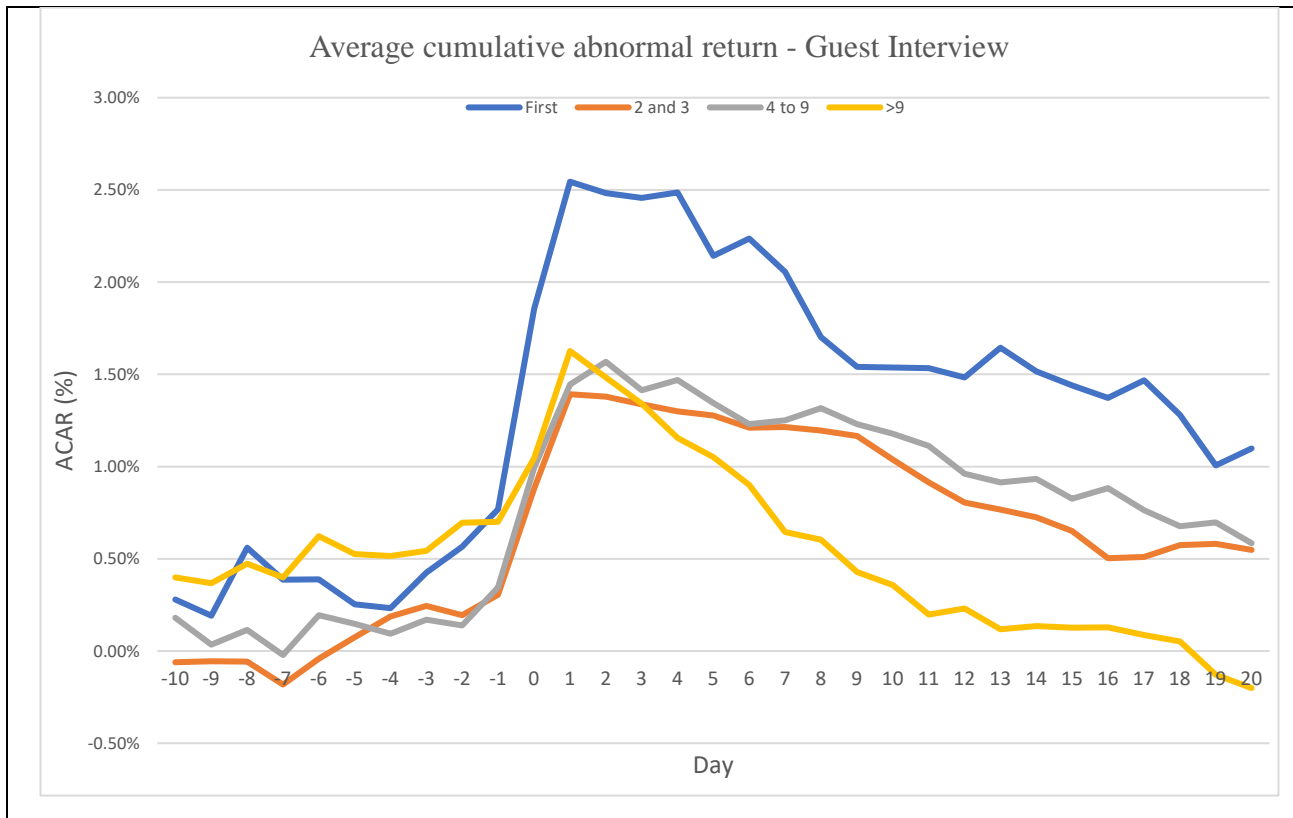
Table B.1: History of relevant Robinhood outages

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 B.2: Top detected institutional investors and internet providers

This table reports the top detected institutional investors and internet providers. We detect unique IPs which sent queries to access financial information on SEC EDGAR using the procedure detailed in Table A.2. 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

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 B.3: The effect on abnormal attention of institutional versus investors of a stock being mentioned on the Show

This table reports the results on investor attention from a firm being mentioned on the show, Mad Money. The dependent variable is Daily abnormal attention ($DAI_{i,t}$), which is the abnormal attention based on accesses of files available on SEC EDGAR related to firm i on day t. The window to measure $DAI_{i,t}$ 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 number of queries on SEC EDGAR regarding a firm over the logarithm of 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 with the CEO or CFO of stock i on day t and is equal to 0 otherwise. We count only institutional IPs in columns (1) to (3) and only retail IPS in columns (4) to (6) to calculate $DAI_{i,t}$. 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 of 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. 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 attention to SEC EDGAR after a Guest interview on SEC (N=11,867,385)

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

Panel B: Abnormal 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)
SHOW	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)
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	0.041	0.041	0.041	0.041	0.041	0.041	0.041

Panel C: Abnormal 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)
SHOW	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)
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 B.4: Short-term effect on abnormal attention of a Guest interview for the stock on the Show

This table reports the short-term results on investor attention from a Guest interview of a firm's CEO or CFO on the show, Mad Money. The dependent variable is the 2-hour abnormal attention ($2HAI_{i,t}$), which is the abnormal 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 $DAI_{i,t}$ is from 6:00 pm (the start time of the Show) to 8:00 pm. Abnormal attention is calculated as the logarithm of the number of queries on SEC EDGAR (posts on StockTwits) regarding a firm over the logarithm of 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 with the CEO or CFO of stock i on day t and is equal to 0 otherwise. We count all non-robot queries on EDGAR in column (1), only institutional IPs in column (2) and only retail IPS in column (3) and Posts on Stocktwits in column (4) to calculate $2HAI_{i,t}$. We use the same control variables as in Table 5 in the main paper. All regressions include firm, week, month, and year fixed effects. 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***	0.380***	0.163***	1.471***
	(9.8)	(8.74)	(4.15)	(22.8)
$Abnormal\ attention_t$	0.300***	0.226***	0.060***	0.062***
	(66.94)	(59.98)	(42.29)	(54.28)
VIX_{t-1}	-0.0001	0.001***	0.0005***	-0.002***
	(-0.76)	(11.02)	(6.19)	(-12.96)
$Market\ return_{t-1,y-29}$	-0.642***	-0.297***	0.017	-0.016
	(-21.05)	(-10)	(1.2)	(-0.58)
$Analyst$	0.039***	-0.045***	0.019***	-0.007
	(-8.51)	(-9.21)	(6.06)	(-1.55)
EA	0.124***	0.104***	-0.023***	0.257***
	(18.07)	(14.2)	(-5.28)	(25.8)
$Retail\ ownership$	0.062***	0.046***	-0.080***	0.006
	(5.93)	(4.1)	(8.62)	(0.63)
$Return_{t-1}$	2.076***	2.050***	1.192***	0.323***
	(10.28)	(8.76)	(6.79)	(9.06)
$ln(Market\ Cap_{t-1})$	-0.012***	-0.023***	0.024***	0.017***
	(-6.48)	(-12.26)	(17.54)	(8.84)
$Ln\ (Turnover_{t-1,t-29})$	-0.002	0.006	0.021***	0.098***
	(-0.66)	(1.64)	(7.65)	(34.19)
$Return_{t-1,t-29}$	-0.019**	-0.033***	-0.002	0.063***
	(-2.25)	(3.5)	(-0.49)	(4.49)
Firm FE	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes
# of observations	4366112	4366112	4366112	4577653
R-squared	0.048	0.042	0.078	0.060

Table B.5: The effect on abnormal attention measured between Shows of a Guest interview for the stock with the exclusion of the EA windows

This table reports the results on investor attention from a Guest interview for a firm on the show, Mad Money. The dependent variable is Daily abnormal attention ($DAI_{i,t}$), which is the abnormal attention based on accesses of 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 $DAI_{i,t}$ 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 number of queries on SEC EDGAR (posts on StockTwits) regarding a firm over the logarithm of 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 with the CEO or CFO of stock i on day t and is equal to 0 otherwise. We count 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 $DAI_{i,t}$. We exclude days with earnings announcements in the window from -7 to +3. Definition of each control variable is provided in Table A.1. All regressions include firm, week, month, and year fixed effects. 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***	0.235***	0.174***	0.098*	0.214***	1.012***	0.899***	0.881***
	(12.1)	(11.19)	(8.82)	(1.87)	(7.15)	(21.56)	(20.69)	(19.43)
$Abnormal\ attention_t$		0.265***	0.316***	0.143***	0.215***		0.176***	0.172***
		(115.95)	(98.52)	(88.29)	(108.36)		(92.22)	(93.3)
VIX_{t-1}			-0.001***	-0.001	-0.001			-0.005***
			(-9.08)	(-0.94)	(-1.97)			(-20.4)
$Market\ return_{t-1,y-29}$			-1.106***	-0.703***	-1.295***			0.286***
			(-62.03)	(-21.46)	(-51.8)			(6.51)
$Analyst$			-0.010***	-0.068***	-0.017***			-0.078***
			(-7.78)	(-14.05)	(-7.64)			(-16.68)
$Retail\ ownership$			0.029***	0.030**	0.065***			0.060***
			(7.35)	(2.51)	(10.92)			(5.66)
$Return_{t-1}$			1.217***	1.366***	1.508***			0.629***
			(7.8)	(6.06)	(7.44)			(7.83)
$ln(Market\ Cap_{t-1})$			0.013***	-0.043***	0.015***			-0.004**
			(24.34)	(-20.81)	(15.64)			(-2.33)
$Ln\ (Turnover_{t-1,t-29})$			0.027***	0.005	0.030***			0.064***
			(14.3)	(1.35)	(10.61)			(20.18)
$Return_{t-1,t-29}$			-0.013***	0.033***	-0.027***			0.100***
			(-2.25)	(3.27)	(-3.26)			(4.68)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year	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 B.6: Heterogeneous effect of Guest interviews on the Show on the abnormal attention of viewers

This table reports the results on investor attention from a firm being mentioned on the show, Mad money. The dependent variable is $DAI_{i,t}$, which is the daily abnormal attention to SEC EDGAR or Stocktwits related to firm i on day t. Abnormal attention is calculated as the logarithm of the number of queries on SEC EDGAR regarding a firm over the logarithm of the median number of queries 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 with the CEO or CFO of 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 (column 1), turnover (column 2), highest retail ownership (column 3), the lowest number of analysts (column 4), during the financial crisis (column 5), on Friday (column 6) or the firm was mentioned on the Show during the last 7 or 30 days (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. In columns 11(12), the dummy variable is equal to 1 if the value-weighted daily return of the applicable stock Market Index (NYSE/AMEX/NASDAQ/ARCA) is at the top (bottom) 1% annually and 0 otherwise. 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. 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 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
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
SHOW	0.244***	0.242***	0.242***	0.232***	0.232***	0.233***	0.243***	0.259***	0.279***	0.244***	0.237***	0.237***
	(11.29)	(11.01)	(10.75)	(11.09)	(10.26)	(11.07)	(10.68)	(10.71)	(7.71)	(8.52)	(11.07)	(11.04)
DumVar	-0.008***	0.060***	0.011***	0.147***	-0.095***	-0.012***	0.008***	0.003*	0.005***	0.032***	-0.018***	0.075***
	(-4.42)	(27.14)	(3.75)	(8.39)	(-24.89)	(-6.39)	(3.06)	(1.92)	(89.14)	(61.66)	(-4.04)	(15.49)
SHOW* DumVar	-0.105	-0.138**	-0.070	0.040	0.056	0.014	-0.048	-0.061	0.004**	-0.014	-0.137	-0.180
	(-0.088)	(-2.11)	(-1.13)	(0.54)	(0.88)	(0.21)	(-1.14)	(-1.42)	(-2.21)	(-1)	(-0.8)	(-1.03)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.112	0.112	0.112	0.112	0.112	0.112	0.112	0.112	0.114	0.112	0.112	0.112

Panel B: Abnormal 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
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
SHOW	0.979***	0.993***	0.984***	0.986***	0.991***	0.997***	0.719***	1.022**	1.044***	0.984***	0.989***
	(21.23)	(21.34)	(20.7)	(22.51)	(20.58)	(21.87)	(3.41)	(16.01)	(18.2)	(21.98)	(21.84)
DumVar	0.017***	0.223***	0.003	0.073***	0.054***	0.52***	-0.270***	0.003***	0.033***	-0.022***	0.186***
	(2.52)	(41.43)	(0.4)	(12.77)	(13.07)	(7.93)	(-53.56)	(29.59)	(30.41)	(-2.56)	(19.79)
SHOW DumVar*	0.419*	-0.221*	0.090	0.409**	0.032	-0.077	0.283	-0.003	-0.051*	0.916**	0.244
	(1.93)	(-1.72)	(0.84)	(2.57)	(0.3)	(-1)	(1.32)	(-0.92)	(-1.71)	(2.44)	(0.73)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.090	0.090	0.090	0.088	0.090	0.090	0.093	0.090	0.090	0.090	0.090

Table B.7: The impact on Turnover of Institutional and retail attention to EDGAR

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 with the CEO or CFO of stock *i* on day *t* and is equal to 0 otherwise. The abnormal attention in columns (1), (2), (4), and (5) are pre-market investor attention (PMIA) to EDGAR from 6:00 pm (the start of the Show) to 9:00 am (Market open) on the next day. The abnormal attention in Columns (3) and (6) are pre-market investor attention (PMIA) on EDGAR from 6:00 pm to 8:00 pm (2-hours window). We count only institutional IPs (columns 1 to 3) and only retail IPS (columns 4 to 6) to calculate $PMIA_{i,t}$. The data are from January 2010 to July 2017. Number of observations is 4,622,449. All regressions include firm, week, month, and year fixed effects. 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***	0.007***	0.007***	0.008***	0.007***	0.007***
	(10.3)	(8.4)	(8.54)	(10.03)	(8.39)	(8.29)
$Abnormal\ attention_t$	0.0003***	0.0006***	0.0003***	0.0004***	0.0003***	0.0001***
	(22.47)	(17.01)	(16.94)	(31.67)	(26.48)	(10.66)
$Abnormal\ attention_t$ $* SHOW_{t-1}$	0.001***	0.0006**	-0.00001	0.0018***	0.0009**	0.0008***
	(3.19)	(2.07)	(-0.01)	(3.88)	(1.98)	(3.05)
Control variables	No	Yes	Yes	No	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.456	0.506	0.506	0.456	0.506	0.506

Table B.8: 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 with the CEO or CFO of stock *i* on day *t* and is equal to 0 otherwise. The abnormal attention in columns (1), (3), (5), and (7) are pre-market investor attention ($PMIA_{i,t}$) from 6:00 pm (the start of the Show) to 9:00 am (Market open) on the next day. The abnormal attention in Columns (2), (4), (6), and (8) are pre-market investor attention (PMIA) from 6:00 pm to 8:00 pm (2-hours window). We count only institutional IPs (columns 1 to 3) and only retail IPs (columns 4 to 6) to calculate $PMIA_{i,t}$. We count all non-robot queries on EDGAR in columns (1) and (2), only institutional IPs (columns 3 and 4), and only retail IPs (columns 5 and 6) to calculate $PMIA_{i,t}$. We use the number of posts on StockTwits to calculate pre-market investor attention ($PMIA_{i,t}$) 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. Control variables are the same as in Table 5 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	Total-2H	Inst	inst-2H	Retail	Retail-2H	total	Total-2H
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$SHOW_{t-1}$	0.006***	0.006***	0.007***	0.007***	0.006***	0.006***	0.004***	0.004***
	(8.14)	(8.56)	(8.8)	(8.98)	(8.77)	(8.67)	(7.2)	(7)
$Abnormal\ attention_t$	0.0004***	0.0001***	0.0002***	0.0003***	0.0002***	0.0001***	0.0006***	0.0010***
	(37.24)	(17.17)	(21.63)	(18.24)	(23.67)	(15.05)	(43.95)	(40.31)
$Abnormal\ attention_t *$ $SHOW_{t-1}$	0.0020***	0.0010***	0.0006***	0.0001	0.0008***	0.0008***	0.0015***	0.0010***
	(3.22)	(3.2)	(2.24)	(0.19)	(2.23)	(3.18)	(4.98)	(3.89)
Control var.	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
# of obs.	5,086,259	5,086,259	5,086,259	5,086,259	5,086,259	5,086,259	4,831,285	4,831,285
R-squared	0.517	0.516	0.516	0.516	0.516	0.516	0.516	0.517

Table B.9: The impact from Guest interviews on Turnover on Mondays

This table reports the results on turnover from a Guest interview of the firm's CEO or CFO 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 with the CEO or CFO of 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 attention is from 6:00 pm on Friday to 9:00 am on Monday (the whole weekend). In Columns (2) and (5), the abnormal attention is from 6:00 pm on Friday to 9:00 am on Saturday. In columns (3) and (6), the abnormal 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. Control variables are the same as in Table 5 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***	0.008***	0.008***	0.005***	0.006***	0.005***
	(4.65)	(4.87)	(8.54)	(4.67)	(5.03)	(4.28)
$Abnormal\ attention_t$	0.0001***	0.0001***	0.0001***	0.0004***	0.0003***	0.0009***
	(25.91)	(12.7)	(10.52)	(16.58)	(25.42)	(27.01)
$Abnormal\ attention_t$ $* SHOW_{t-1}$	-0.0003	0.0003	-0.0003	0.0023***	0.0012**	0.0016***
	(065)	(0.27)	(-0.31)	(2.99)	(2.21)	(2.36)
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
# of obs.	797,903	797,903	797,903	816,489	816,489	816,489
R-squared	0.520	0.519	0.519	0.520	0.520	0.520

Table B.10: The impact on Turnover from Guest interviews excluding the EA windows

This table reports the results on turnover from a Guest interview of a firm's CEO or CFO 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 with the CEO or CFO of stock i on day t and is equal to 0 otherwise. The abnormal attention in columns (3) and (5) are pre-market investor attention (PMIA) to EDGAR from 6:00 pm (start of the Show) to 9:00 am (Market open) on the next day. The abnormal attention in Columns (4) and (6) are pre-market investor attention (PMIA) to Stocktwits from 6:00 pm to 8:00 pm (2-hours window). We exclude days with earnings announcements (EA) 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. All regressions include firm, week, month, and year fixed effects. 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***	0.008***	0.0076***	0.0071***	0.006***	0.006***
	(2.9)	(6.13)	(6.83)	(7.33)	(4.31)	(4.54)
Abnormal attention$_t$			0.0005***	0.0002***	0.0007***	0.0022***
			(23.61)	(12.75)	(24.27)	(21.46)
Abnormal attention$_t$ * SHOW$_{t-1}$			0.0027***	0.0013***	0.0015***	0.0006*
			(3.14)	(2.75)	(4.12)	(1.66)
Size			-0.0015***	-0.0015***	-0.002***	-0.0022***
			(-12.26)	(-12.67)	(-15.95)	(-16.03)
$Return_{t-1,y-29}$			-0.0003	-0.0004	0.001**	0.0017**
			(-0.57)	(-0.57)	(2.05)	(2.13)
Analyst		0.004***	0.003***	0.0039***	0.004***	0.0048***
		(14.88)	(12.82)	(12.83)	(14.99)	(14.83)
Retail ownership		-0.0005	-0.0009	-0.0009	0.0009	0.0009
		(-0.55)	(-1.02)	(-1.01)	(1.03)	(1.05)
$Return_{t-1}$		0.0048***	0.0001***	0.0019***	0.006***	0.006***
		(4.85)	(2.48)	(2.43)	(4.59)	(4.9)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Weekday, Month, Year FE	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
R-squared	0.002	0.267	0.311	0.311	0.246	0.246

Table B.11: The effect on the PI for Robinhood users from Guest interviews on the Mad Money Show for Mondays

This table reports the results on the popularity index (PI) for Robinhood users from a Guest interview of a firm's CEO or CFO 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 with the CEO or CFO of 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 attention for Friday Shows. In column (1), the abnormal attention is from 6:00 pm on Friday to 9:00 am on Monday (the whole weekend). In Column (2), the abnormal attention is from 6:00 pm on Friday to 9:00 am on Saturday. In column (3), the abnormal attention is from 6:00 pm to 8:00 pm on Friday. Control variables are the same as in Table 8 in the main paper. All regressions include firm, week, month, and year fixed effects. 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***	1.534***	1.726***
	(3.3)	(3.85)	(2.95)
$Abnormal\ attention_t$	0.079***	0.294***	0.037***
	(18.29)	(11.28)	(11.4)
$Abnormal\ attention_t * SHOW_{t-1}$	0.0594	-0.018	-0.108
	(0.16)	(-0.1)	(-0.48)
Control Variables	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes
Weekday, Month, Year FE	Yes	Yes	Yes
Number of Obs.	113,078	113,078	113,078
R-squared	0.194	0.194	0.194

Table B.12: The effect on the PI for Robinhood users from Guest interviews for stocks mentioned on the Mad Money Show excluding the 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 with the CEO or CFO of 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 attention in column (3) (column 4) is pre-market investor attention (PMIA) to Stocktwits from 6:00 pm to 9:00 am on the next day (6:00 pm to 8:00 pm). We exclude days with earnings announcements (EA) in the window from -7 to +3. All regressions include firm, week, month, and year fixed effects. 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***	1.630***	1.154***	1.077***	0.592***	0.743***
	(11.63)	(10.07)	(7.19)	(6.37)	(9.68)	(7.91)
$Abnormal\ attention_t$			0.036***	0.030****		
			(21.6)	(31.03)		
$Abnormal\ attention_t$ * $SHOW_{t-1}$			0.412***	0.257***		
			(3.57)	(3.56)		
$\%Change_{t-1}$		0.275***	0.271***	0.272***	0.075***	0.181***
		(31.08)	(30.96)	(31.03)	(27.98)	(26.52)
$Size$		0.008*	0.009**	0.009**	-0.003***	0.013***
		(1.98)	(2.22)	(2.11)	(-2.68)	(3.69)
$Return_{t-1,y-29}$		-0.264***	-0.275***	-0.270***	-0.052***	-0.229***
		(7.29)	(-7.56)	(-7.51)	(-4.32)	(7.75)
$Analyst$		-0.006	-0.003	-0.005	0.000	-0.004
		(-0.63)	(-0.34)	(-0.55)	(-0.02)	(-0.54)
$Retail\ ownership$		0.095***	0.095***	0.102***	0.021***	0.074***
		(5.18)	(5.21)	(5.5)	(3.61)	(5.03)
$Return_{t-1}$		2.134***	2.09***	2.111***	1.081***	0.807***
		(18.9)	(18.62)	(18.8)	(24.61)	(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 B.13: Average cumulative abnormal returns (ACARs) over the 20-day post-Show for stocks recommended/mentioned on the Mad Money Show

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 effects on the 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. All regressions include firm, week, month, and year fixed effects. 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	-0.0109***	0.0112***	0.0007	0.0031	-0.0095***	0.0112***
	(-6.63)	(6.7)	(0.28)	(0.39)	(-7.13)	(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