

Discussion of “The Rise of Reddit: How Social Media Affects Belief Formation and Price Discovery” (Hu, Jones, Li, Zhang, Zhang)

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May 20th, 2024

What does this paper do?

Home

r/wallstreetbets
u/helloregards • 54m

Literally STFU About the So-Called Alleged Upcoming Market Crash

Market crashes are supposed to be catastrophic. Shocking. UNEXPECTED. If it is expected, it is already priced in. Also everyone's game plan for the market crash is the exact same: IF THE MARKET CRASHES TOMORROW WE ARE...

Vote 31 Share



Overall impression

- Greatly enjoyed reading it.
- Highly recommend people take a look at the paper.

Context

Online Investing Forums have gotten big

The screenshot shows the SEC.gov website in a browser window. The browser's address bar displays 'sec.gov'. The website header includes the SEC logo, the text 'U.S. SECURITIES AND EXCHANGE COMMISSION', and a search bar labeled 'Search SEC.gov'. A navigation menu below the header lists 'ABOUT', 'DIVISIONS & OFFICES', 'ENFORCEMENT', 'REGULATION', 'EDUCATION', 'FILINGS', and 'NEWS'. The 'FILINGS' menu is open, showing a list of links: 'EDGAR – Search & Access', 'EDGAR – Information for Filers', 'Company Filing Search', 'How to Search EDGAR', 'Forms List', and 'About EDGAR'. The main content area features a large image of people working together, with the heading 'CREATING JOBS' and a paragraph: 'The SEC's regulation of the securities markets facilitates capital formation, which helps entrepreneurs start businesses and companies grow. Last year \$5 trillion was raised in public and private securities offerings, promoting economic growth and job creation.' At the bottom, there are five icons representing different services: a megaphone, a cube, a shield with a star, a bar chart, and a smartphone.

Context

Online Investing Forums have gotten big

Engagement overview ⓘ
Jan 2024 - Mar 2024 Worldwide All Traffic

| | |
|---------------------------|--------|
| Monthly visits ⓘ | 7.658M |
| Monthly Unique Visitors ⓘ | 3.883M |

Engagement overview ⓘ
Jan 2024 - Mar 2024 Worldwide All Traffic

| | |
|---------------------------|--------|
| Monthly visits ⓘ | 19.51M |
| Monthly Unique Visitors ⓘ | 5.602M |

Engagement overview ⓘ
Jan 2024 - Mar 2024 Worldwide All Traffic

| | |
|---------------------------|--------|
| Monthly visits ⓘ | 13.83M |
| Monthly Unique Visitors ⓘ | 1.288M |



Context

Online Investing Forums have gotten big

The screenshot shows a web browser displaying the Wall Street Journal homepage. The browser's address bar shows 'wsj.com'. The page features a dark navigation bar with links to 'WSJ', 'Barron's', 'MarketWatch', 'IBD', and 'Buy Side from WSJ'. Below this, a market index bar displays: FTSE 100 8200.35 (0.35% up), DAX 17957.32 (0.34% up), CAC 40 7954.43 (0.50% up), and Stoxx Europe 50 Index 4375.44 (0.11% up). The main header includes 'THE WALL STREET JOURNAL.' logo, the name 'Byoung-Hyoung Hwang', and a search bar. A secondary navigation bar lists categories: Latest, World, Business, U.S., Politics, Economy, Tech, Finance, Opinion, Arts & Culture, Lifestyle, Real Estate, Personal Finance, Health, Style, and Sports. Below this, a profile section for 'Evan Gershkovich' (13 Months Detained) includes links for 'A Stolen Year', 'His Family Reflects', 'A Timeline', 'His Reporting', 'How You Can Help', 'Write a Message', and 'Peers Read Hi:'. The main content area features two article teasers. The first is an 'EXCLUSIVE' article titled 'U.S. Shuffles Military Assets in Middle East After Gulf Pushback', with a sub-headline 'Washington is shifting some warplanes to Qatar to allay concerns among Gulf powers about riling Iran and its proxies.' and a '5 min read' indicator. The second is an illustration of two men in a kitchen setting, with the headline ''Finance Bro' Outfits Desperately Need an Update. We Have Fixes.'

Context

Online Investing Forums have gotten big

Engagement overview ⓘ

📅 Jan 2024 - Mar 2024 🌐 Worldwide 📱 All Traffic

📅 Monthly visits ⓘ 93.87M

👤 Monthly Unique Visitors ⓘ 31.41M

Engagement overview ⓘ

📅 Jan 2024 - Mar 2024 🌐 Worldwide 📱 All Traffic

📅 Monthly visits ⓘ 19.51M

👤 Monthly Unique Visitors ⓘ 5.602M

Seeking Alpha^α

Engagement overview ⓘ

📅 Jan 2024 - Mar 2024 🌐 Worldwide 📱 All Traffic

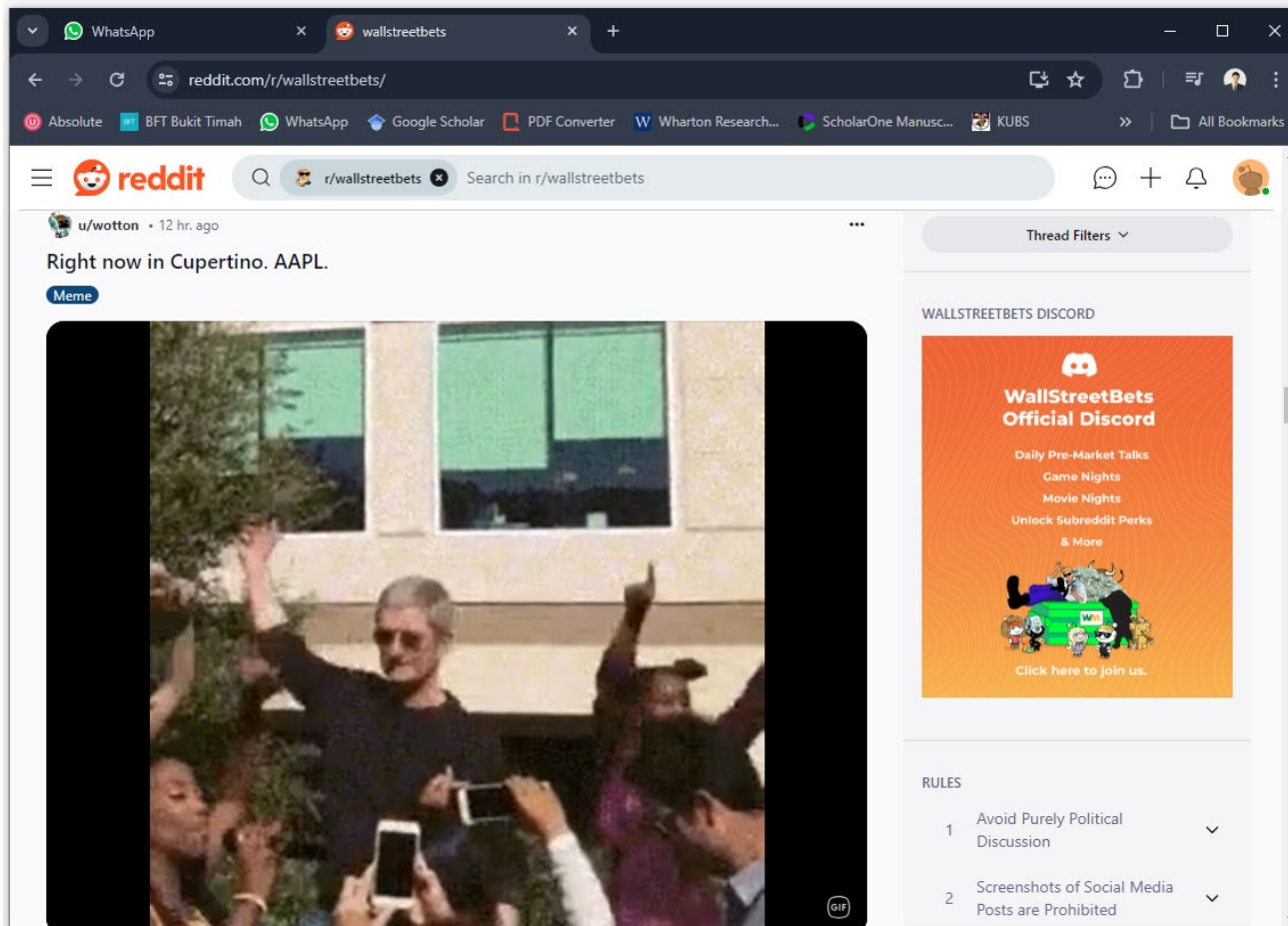
📅 Monthly visits ⓘ 13.83M

👤 Monthly Unique Visitors ⓘ 1.288M

 **Stocktwits**

Context

Online Investing Forums have gotten big



The screenshot shows a web browser window displaying a Reddit post on the r/wallstreetbets subreddit. The browser's address bar shows the URL reddit.com/r/wallstreetbets/. The post is by user u/wotton, posted 12 hours ago, and is titled "Right now in Cupertino. AAPL." with a "Meme" tag. The main content is a video showing a man in a dark shirt and sunglasses, likely Tim Cook, with his arms raised in a celebratory gesture, surrounded by a crowd of people. To the right of the post, there is a "Thread Filters" section with a dropdown arrow. Below that is a promotional banner for "WALLSTREETBETS DISCORD" with an orange background, featuring the Discord logo, the text "WallStreetBets Official Discord", and a list of activities: "Daily Pre-Market Talks", "Game Nights", "Movie Nights", and "Unlock Subreddit Perks & More". At the bottom of the banner is a "Click here to join us." link. Below the banner is a "RULES" section with two numbered items: "1 Avoid Purely Political Discussion" and "2 Screenshots of Social Media Posts are Prohibited".

Context

Online Investing Forums have gotten big

Engagement overview ⓘ

📅 Jan 2024 - Mar 2024 🌐 Worldwide 📱 All Traffic

📅 Monthly visits ⓘ 2.108B

👤 Monthly Unique Visitors ⓘ 302.4M



Suggestion 1

ABSTRACT

Using submission level data from social media platform Reddit, we rely on the theoretical framework of Pedersen (2022) **to examine how social media affects belief formation, price discovery and trading dynamics...**

Suggestion 1

Investing Forums differ A LOT in structure

The screenshot displays a web browser with multiple tabs. The primary window is on the Reddit page for the subreddit **r/wallstreetbets**. The page header includes the Reddit logo, a search bar, and navigation icons. The main content area shows a post by user **u/mortgagepants** titled "Federal Reserve Bank of Minneapolis President Neel Kashkari speaks on Tuesday 11:30 am Wall Street time". The post includes a video thumbnail of Neel Kashkari and engagement metrics (4 upvotes, 3 comments). The right sidebar provides community statistics: 15M members, 11K online, and 49 ranks. It also lists community bookmarks (Wiki, YouTube, Discord, Twitch) and a link to the WallStreetBets Official Discord server.

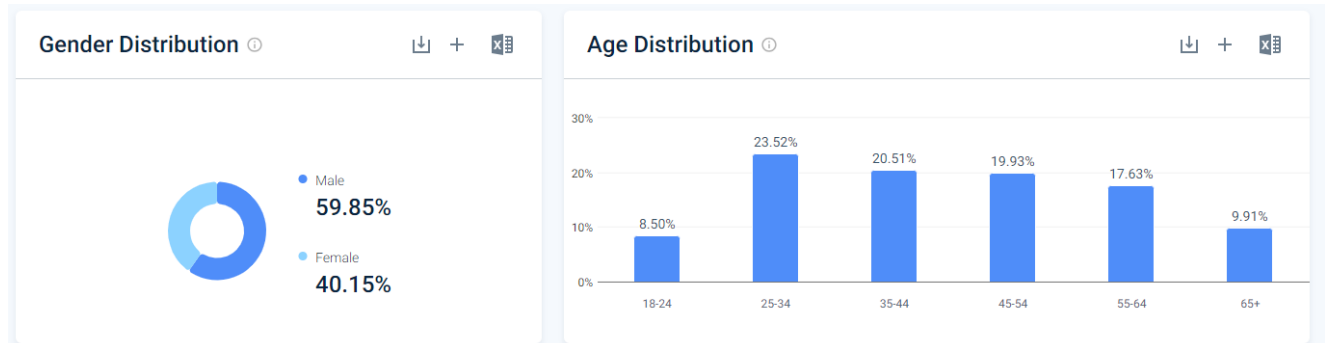
On the right side of the browser, a secondary window displays a financial data table with the following entries:

| Symbol | Price | Change |
|-------------|-------------|--------------------|
| X | \$63,564.95 | ↓ \$34.25 (0.05%) |
| X | \$3,071.80 | ↓ \$31.45 (1.01%) |
| X | \$590.90 | ↑ \$4.40 (0.75%) |
| X | \$154.56 | ↑ \$3.54 (2.34%) |
| E.X | \$0.157 | ↓ \$0.0012 (0.74%) |
| ve | \$516.88 | ↑ \$0.31 (0.06%) |
| S&P 500... | \$22.22 | ↓ \$2.99 (11.86%) |
| ir Techn... | \$181.38 | ↓ \$3.38 (1.83%) |

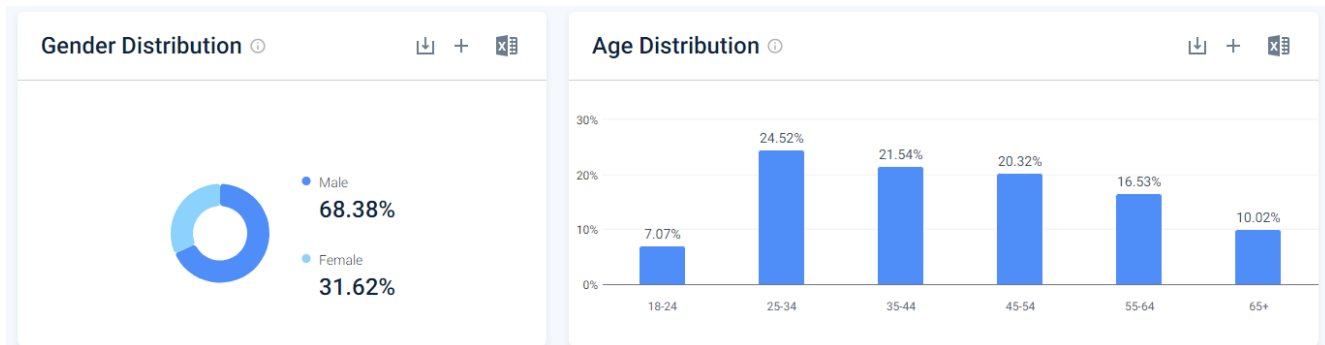
Suggestion 1

Investing Forums also differ in user base

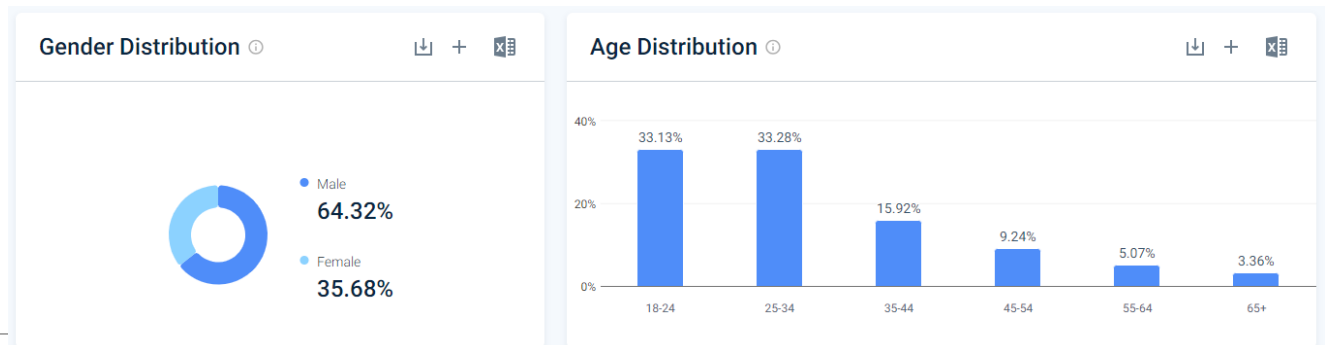
WSJ



Seeking Alpha^α



reddit



Suggestion 1

These Differences Likely Matter!

- Structure of social media platform matters A LOT in spread of mis-/disinformation (e.g., Cinelli, Morales, Galeazzi, Quattrociocchi, Starnini, *Proceedings of National Academy of Sciences of the USA*, 2021)

Suggestion 1

These Differences Likely Matter!

- Comparatively few studies looking at how **Reddit** →



BUT quite a few studies out there already looking at **Seeking Alpha/StockTwits**



Things authors could consider:

- Explain differences in structure/user base between Reddit and other platforms
- Frame paper as evidence on how certain platform features affect investor behavior

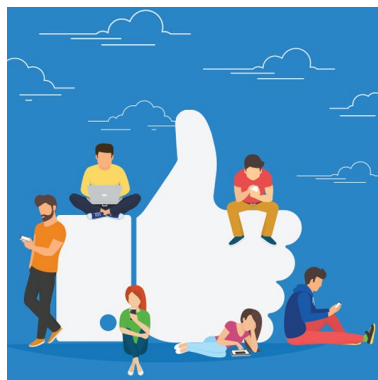
Paper's Main Findings



Paper's Main Findings

- Sample period: January 2020 – February 2021
("GameStop short squeeze:" January 2021 – March 2021)

Paper's Main Findings



“Hardheaded”

post more than 95% of other agents over past week
+ non-positive or non-negative tone for at least 75% of posts

“Naive”

87.7%

“Rational”

At least one post contains
“value-relevant word”

4.4%

“Fanatic”

None of the posts contain
“value-relevant word”

7.9%

Paper's Main Findings



“High-Influence” Network
Total number of commenters on
given firm above 90th percentile

“Low-Influence” Network
Total number of commenters on
given firm below 90th percentile

Some return predictability

“Active,
pushing one direction”

| | I. Whole sample | II. High influence subsample | III. Low influence subsample |
|-------------------|--------------------|------------------------------|------------------------------|
| | Return(t) | Return(t) | Return(t) |
| FanaticTone(t-1) | 0.0089** [1.99] | 0.0449*** [4.44] | -0.0071 [-1.58] |
| RationalTone(t-1) | -0.0025 [-0.38] | 0.0426*** [2.87] | -0.0186*** [-2.89] |
| NaïveTone(t-1) | 0.0060 [1.43] | 0.1775*** [6.02] | -0.0121*** [-3.43] |



Some shorting flow predictability

“Active,
pushing one direction”

| | I. Whole sample | II. High influence subsample | III. Low influence subsample |
|-------------------|---------------------|------------------------------|------------------------------|
| | ShortFlow(t) | ShortFlow(t) | ShortFlow(t) |
| FanaticTone(t-1) | 0.0084 [1.29] | -0.0079 [-0.93] | 0.0205** [2.42] |
| RationalTone(t-1) | -0.0033 [-0.36] | -0.0091 [-0.79] | 0.0044 [0.37] |
| NaïveTone(t-1) | 0.0223*** [2.84] | -0.023 [-1.52] | 0.0287*** [3.48] |

FINANCIAL TIMES

US COMPANIES TECH MARKETS CLIMATE OPINION WORK & CAREERS LIFE & ARTS HTSI

Hedge funds [+ Add to myFT](#)

Melvin Capital, GameStop and the road to disaster



Generally sympathetic to this argument

Since GameStop, there are many websites/vendors actively tracking social media activity



<https://www.quiverquant.com/wallstreetbets/>

Generally sympathetic to this argument

- Institutions REPORT paying attention to social media activity
- Conducted survey of **435 institutional investors** [146 US retail investors]:

| | | |
|---------------------|-----|-----|
| \$10m to \$999.9m | 136 | 31% |
| \$1bn to \$9.99bn | 128 | 29% |
| \$10bn to \$49.99bn | 80 | 18% |
| \$50bn+ | 91 | 21% |

- To what extent do you agree or disagree with the following statements?
[I or my team **regularly monitor social media outlets/blogs/online forums** to gain an understanding of what retail investors are saying about different stocks, either through direct review or by receiving summarized data from a data vendor.]

Only 49% say 'no'

43% for retail investors

Generally sympathetic to this argument

- [The **meme stocks phenomenon** (i.e. stocks gaining viral popularity due to heightened attention on social media/blogs/online forums) is **likely to continue or intensify over the next few years.**]

Only 33% say 'no'

26% for retail investors

- [In the last 12 months, we have made **changes to our portfolio** (e.g. sold, bought or hedged a stock) **as a direct result of information gleaned from online forums.**]

19% say 'yes'

46% for retail investors

Suggestion 2



- BUT sample period: January 2020 – February 2021
("GameStop short squeeze:" January 2021 – March 2021)

Suggestion 2

Could Short-Sellers Just Be Informed?

| | I. Whole sample | II. High influence subsample | III. Low influence subsample |
|-------------------|--------------------|------------------------------|------------------------------|
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Suggestion 2



Things authors could consider:

- Check whether effect becomes more pronounced post-Melvin Capital Meltdown

